The Economist

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APRIL 1ST–7TH 2023

AMERICA V CHINA

It's worse than you think



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Politics

Mar 30th 2023



Binyamin Netanyahu, **Israel's** prime minister, agreed to pause legislation intended to weaken the Supreme Court and politicise judicial appointments, after mass protests brought the country to a halt. Organisers of the demonstrations claim that almost 7% of the population marched against the new laws. Thousands of soldiers and pilots in elite reserve units said they would not report for duty if the law passed. The calm may last until April 30th, when the Knesset sits again.

UN investigators have found evidence that **Libya's** security forces and militias committed war crimes and crimes against humanity, including the systematic torture of migrants.

Al-Shabab, a jihadist group in **Somalia** that is affiliated to al-Qaeda, has lost almost a third of its territory to government offensives, according to the American ambassador.

America is to provide $100m in security assistance to help **west African** countries battle jihadists. Most of the money will be provided over the next three years to Benin, Ghana, Guinea, Ivory Coast and Togo. This is in addition to direct assistance to Ghana that was announced by Kamala Harris, America's vice-president, on a trip to the region.

The political opposition to the Hindu nationalist government in **India** demanded that Rahul Gandhi be reinstated to Parliament. Mr Gandhi, the leader of the Congress party, says that his recent conviction for defaming Narendra Modi, the prime minister, was politically motivated. He was sentenced to two years in prison for comments he made in a speech in 2019 but is out on bail pending an appeal.

The prime minister of **Pakistan**, Shehbaz Sharif, asked Parliament to take action against Imran Khan, his predecessor, whose supporters clashed with police when they tried to arrest him on graft charges in mid-March. Mr Sharif did not specify what he wanted Parliament to do, though some members of the government have called for Mr Khan's party to be banned.

In **Myanmar** the ruling junta dissolved the National League for Democracy, Aung San Suu Kyi's party, and dozens of other political parties, because they had missed a deadline to register for unspecified elections, which will anyway be a sham.

Own goal

FIFA, football's global governing body, said that **Indonesia** would not now host the under-20s football World Cup, which begins in May. The governor of Bali, where some of the matches were due to be held, had refused to allow the Israeli team to play.

Energy ministers in the **European Union** gave final approval to an agreement that will require all new cars to have zero carbon-dioxide emissions by 2035. The deal had been held up by Germany, which secured an opt-out for vehicles that run on e-fuels that are made from carbon and hydrogen and cleaner than petrol, but still carbon-emitting.

Police again fired tear-gas at demonstrators in **France**, amid fresh protests against a bill that raises the state retirement age from 62 to 64. A huge demonstration in Paris on March 23rd ended with the worst violence seen on the city's streets in years, which was blamed on anarchists. The trouble forced President Emmanuel Macron to postpone a visit by Britain's King Charles, which would have been his first official trip overseas as monarch. The king went to Germany instead.

The **Hungarian** parliament approved **Finland's** application to join **NATO**. Turkey has also said it will support the application, all but securing Finland's membership of the military alliance. Hungary and Turkey have yet to ratify Sweden's bid to join.

The **Greek** prime minister called parliamentary elections for May 21st. The governing New Democratic Party has seen its lead in the polls over the leftist Syriza melt away over the cost-of-living crisis and a deadly train crash.

Humza Yousaf was elected leader of the Scottish National Party and became **Scotland's** first minister, succeeding Nicola Sturgeon, who resigned suddenly in February. The election campaign highlighted the disquiet within the party on a number of issues. Kate Forbes, who was Scottish finance secretary, finished a close second and quit the cabinet after she was offered a role in rural affairs.



At least 40 people died in a fire at a migrant detention centre in Ciudad Juárez, a **Mexican** city near the border with America. The blaze was thought to have been started by migrants after hearing that they would be deported.

Dina Boluarte, the president of **Peru**, was named in an investigation by the attorney-general. Ms Boluarte and Pedro Castillo, her predecessor, who was ousted after he attempted a coup in December, are accused of laundering money during the presidential campaign of 2021. Both deny any wrongdoing.

Taiwan's president, Tsai Ing-wen, embarked on a trip to Central America that is bookended by stops in New York and Los Angeles. **China** warned Ms Tsai not to meet the speaker of America's House of Representatives, Kevin McCarthy, in California. Meanwhile Ma Ying-jeou became the first sitting or former Taiwanese president to visit China. Mr Ma was in office from 2008 to 2016. His trip was criticised by Ms Tsai's party.

A shooter murdered six people at a Christian school in **Nashville**, including three nine-year-olds. Police shot dead the suspect, a former pupil who was described as a biological female who used male pronouns.

At least 25 people were killed in **Mississippi** by a giant tornado that smashed through the town of Rolling Fork. The tornado lasted for 70

minutes, reaching wind speeds of between 166 and 200 miles per hour (267 to 321kph).

The White House said that Joe Biden would **veto** an energy bill crafted by Republicans if it passes Congress, because it would make energy-efficiency measures more costly. This came after Republicans failed to override Mr Biden's first veto in office. The president scrapped a measure that would have made it harder for pension funds to consider environmental, social and corporate-governance (ESG) factors in their investments.

A greener and pleasant land

America generated more electricity from **renewable energy** than coal for the first time last year, according to the Energy Information Administration. Renewables accounted for 21% of electricity generation. Natural gas remained the largest source, at 39%.

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Business

Mar 30th 2023



Alibaba announced plans to turn itself into a holding company overseeing six divisions, which could potentially pursue their own stockmarket listing. The six units will include the Chinese tech company's struggling cloud-computing business, media and e-commerce. Alibaba was not forced by regulators to split, but its radical overhaul comes nearly three years after the start of the Chinese government's crackdown on tech giants for becoming too powerful. Meanwhile, **Jack Ma**, Alibaba's founder, returned to China for the first time in more than a year, which was taken as another sign that regulators are easing their campaign.

Sergio Ermotti is returning to **UBS** as chief executive to guide the Swiss bank's emergency takeover of **Credit Suisse**. Mr Ermotti ran UBS from 2011 to 2020. He is replacing Ralph Hamers, "who has agreed to step down to serve the interests of the new combination", according to UBS. Merging the two banks is immensely complicated, it said, which calls for Mr Ermotti's "unique experience".

There was another casualty from the fallout surrounding the collapse of Credit Suisse. Ammar al-Khudairy resigned as chairman of **Saudi National Bank**, a big investor in the Swiss bank. His comments in March about not investing more in Credit Suisse were followed by a market rout.

Deutsche Bank clawed back most of the losses from a sell-off caused by the soaring price of its credit-default swaps, which act as an insurance against a default on its debts. In a jittery market the sell-off spread to other banking stocks, but they, too, recovered.

A costly bankruptcy

America's Federal Deposit Insurance Corporation engineered the sale of **Silicon Valley Bank's** deposits and loans to **First Citizens**, a bank based in North Carolina. The FDIC estimates that the failure of SVB will cost its deposit-insurance fund $20bn.

Binance, the world's biggest crypto exchange, faced its most serious legal challenge yet when a regulator in America accused it of operating illegally. In a civil lawsuit the Commodity Futures Trading Commission alleged that much of Binance's trade and profit comes from America, but it had never registered with the CFTC and "disregarded" financial laws. Changpeng Zhao, Binance's boss, said the complaint was "unexpected and disappointing".

American prosecutors added another charge against **Sam Bankman-Fried**, who ran FTX until the crypto exchange's spectacular collapse last November. Prosecutors now contend that Mr Bankman-Fried paid $40m in bribes to Chinese officials in 2021 to allow him access to accounts linked to a sister company.

Bob Iger continued his shake-up of **Disney**. Isaac Perlmutter was removed as chairman of Marvel Entertainment (which is separate from Marvel Studios); his relationship with Mr Iger has been described as rocky. Disney is also scrapping its nascent attempt to expand into the metaverse, a strategy that envisioned immersing audiences in a digital "experience". Mr Iger is focused on trying to turn a profit from Disney's streaming platforms.

Elliott Management, an activist hedge fund, withdrew plans to nominate directors to the board of **Salesforce**, after the business-software company produced a solid set of earnings and a new strategy for growth. Elliott and other shareholders had criticised Salesforce for splashing out on costly acquisitions, such as Slack and Tableau.

Bits of the source code that underlies **Twitter** were published on GitHub, a repository for open-source software. Hackers could use the code to attack the platform. GitHub removed it after Twitter threatened legal action. Elon Musk, meanwhile, appeared to backtrack on a plan to promote tweets only from verified users. He also reportedly thinks Twitter is worth $20bn; he paid $44bn for it in October.

The share price of **Block**, a retail-payments system marketed as Square, struggled to recover from a sharp fall sparked by a report from Hindenburg Research, which specialises in short-selling stock, claiming it had “wildly overstated” its number of users and “misled investors”. A report by Hindenburg into the Adani Group in India triggered a sell-off in its shares in January. Block said Hindenburg’s claims were “misleading” and it was considering legal action.

Do you read me, HAL?

A study by Goldman Sachs estimated that two-thirds of jobs in America and Europe could be affected by **generative artificial-intelligence**, and 7% of workers could lose their jobs. This week more than 1,100 people associated with the AI industry, including Elon Musk and Steve Wozniak, signed a petition calling for a six-month pause in developing systems such as ChatGPT so that discussions can take place on better oversight.

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The world this week

KAL's cartoon

Mar 30th 2023



Dig deeper into the subject of this week's cartoon:
[Why isn't America's gun-control movement more effective?]
[A spate of gun violence shows American exceptionalism at its worst]
[Gun groups have their own ideas for preventing mass shootings]

KAL's cartoon appears weekly in The Economist. You can see last week's here.

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The Economist

This week's cover

How we saw the world

Mar 30th 2023

A NEW AND dangerous phase of the Sino-American contest is under way. Don't underestimate the fallout.



Leader: America v China: It's worse than you think
Briefing: America's commercial sanctions on China could tighten
Chaguan: Defanging the Chinese tiger

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Leaders

- **Why the China-US contest is entering a new and more dangerous phase**
- **How to fix the global rice crisis**
- **Israel should not squander the opportunity for meaningful constitutional talks**
- **America risks propping up zombie banks**
- **The Scottish National Party's limitations have been laid bare**

America v China

Why the China-US contest is entering a new and more dangerous phase

Chinese officials rage at what they see as American bullying

Mar 30th 2023



YOU MAY have hoped that when China reopened and face-to-face contact resumed between politicians, diplomats and businesspeople, Sino-American tensions would ease in a flurry of dinners, summits and small talk. But the atmosphere in Beijing just now reveals that the world's most important relationship has become more embittered and hostile than ever.

In the halls of government Communist Party officials denounce what they see as America's bullying. They say it is intent on beating China to death. Western diplomats describe an atmosphere laced with intimidation and paranoia. In the Diaoyutai State Guesthouse, multinational executives attending the China Development Forum worried what a deeper decoupling would mean for their businesses. The only thing both sides agree on is that the best case is decades of estrangement—and that the worst, of a war, is growing ever more likely.

Each side is following its own inexorable logic. America has adopted a policy of containment, although it declines to use that term. It sees an authoritarian China that has shifted from one-party to one-man rule. President Xi Jinping is likely to be in power for years and is hostile to the West, which he believes is in decline. At home he pursues a policy of repression that defies liberal values. He has broken promises to show restraint when projecting power outward, from Hong Kong to the Himalayas. His meeting with Vladimir Putin this month confirmed that his goal is to build an alternative world order that is friendlier to autocrats.

Faced with this, America is understandably accelerating its military containment of China in Asia, rejuvenating old alliances and creating new ones, such as the AUKUS pact with Australia and Britain. In commerce and technology America is enacting a tough and widening embargo on semiconductors and other goods. The goal is to slow Chinese innovation in order that the West can maintain its technological supremacy: why should America let its inventions be used to make a hostile regime more dangerous?

To China's leaders, this amounts to a scheme to cripple it. America, in their eyes, thinks it is exceptional. It will never accept that any country can be as powerful as itself, regardless of whether it is communist or a democracy. America will tolerate China only if it is submissive, a "fat cat, not a tiger". America's Asian military alliances mean that China feels it is being encircled within its own natural sphere of influence. Red lines agreed on in the 1970s, when the two countries re-established relations, such as those on Taiwan, are being trampled by ignorant and reckless American politicians. China's rulers think it only prudent to raise military spending.

In commerce, they view American containment as unfair. Why should a country whose GDP per head is 83% lower than America's be deprived of vital technologies? Officials and businesspeople were appalled by the spectacle of TikTok, the subsidiary of a Chinese firm, being roasted in an American congressional hearing this month. Although some Chinese liberals dream of emigrating, even worldly, Western-educated technocrats now loyally condemn shows of wealth, promote self-reliance and explain why globalisation must serve Mr Xi's political priorities.

Given two such entrenched and contradictory world-views, it is naive to think that more diplomacy alone can guarantee peace. A meeting in Bali between President Joe Biden and Mr Xi in November eased tensions, but the deeper logic of confrontation soon reasserted itself. The spy-balloon crisis (Chinese officials mock America for downing what they call a stray "naughty balloon") showed how both leaders must appear tough at home. America wants China to adopt guardrails to control the rivalry, including hotlines and protocols on nuclear weapons, but China sees itself as the weaker party: why tie yourself down with rules set by your bully? Nothing suggests the hostilities will ease. America's election in 2024 will show that China-bashing is a bipartisan sport. Mr Xi faces a slowing economy and has tied his legitimacy to a vision of a muscular and "rejuvenated" nation.

Faced with such an opponent, America and other open societies should adhere to three principles. The first is to limit economic decoupling, which the IMF reckons could cost anything between a manageable 0.2% of world GDP and an alarming 7%. Trade in non-sensitive sectors also helps maintain routine contact between thousands of firms, thereby narrowing the geopolitical divide. Embargoes should be saved for sensitive sectors or areas in which China has a chokehold because it is a monopoly supplier: these account for a minority of Sino-American trade. Where possible, businesses that straddle both sides of the cold war, such as TikTok—accused of spreading Chinese misinformation—should be ring-fenced, sold or spun off, not be forced to close.

The second principle is to lower the chances of war. Both sides are locked in a "security dilemma" in which it is rational to shore up your position, even as that makes the other side feel threatened. The West is right to seek military deterrence to meet a growing Chinese threat—the alternative is a collapse of the American-led order in Asia. But seeking military dominance around flashpoints, notably Taiwan, could spark accidents or clashes that spiral out of control. America should aim to deter a Chinese attack on Taiwan without provoking one. This will take wisdom and restraint from a generation of politicians in Washington and Beijing who, by contrast with the leaders of America and the Soviet Union in the 1950s, have no personal experience of the horrors of a world war.

The last principle is that America and its allies must resist the temptation to resort to tactics that make them more like their autocratic opponent. In this rivalry, liberal societies and free economies have big advantages: they are more likely to create innovations and wealth and to command legitimacy at home and abroad. If America sticks to its values of openness, equal treatment of all and the rule of law, it will find it easier to maintain the loyalty of its allies. America must be clear that its dispute is not with the Chinese people, but with China's government and the threat to peace and human rights that it poses. The 21st century's defining contest is not just about weapons and chips—it is a struggle over values, too. ■

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Green revolution 2.0

How to fix the global rice crisis

The world's most important crop is fuelling climate change and diabetes

Mar 30th 2023



THE GREEN revolution was one of the greatest feats of human ingenuity. By promoting higher-yielding varieties of wheat and, especially, rice, plant-breeders in India, Mexico and the Philippines helped China emerge from a famine and India avoid one. From 1965 to 1995 Asia's rice yields doubled and its poverty almost halved, even as its population soared.

Asia's vast rice market is a legacy of that triumph. The starchy grain is the main source of sustenance for over half the world's population. Asians produce over 90% of rice and get more than a quarter of their calories from it. And demand for the crop is projected to soar, on the back of population growth in Asia and Africa, another big rice consumer. By one estimate, the world will need to produce almost a third more rice by 2050. Yet that looks increasingly hard—and in some ways undesirable.

Rice production is spluttering. Yields have increased by less than 1% a year over the past decade, much less than in the previous one. The greatest slowdowns were in South-East Asia, where Indonesia and the Philippines—

together, home to 400m people—are already big importers. This has many explanations. Urbanisation and industrialisation have made labour and farmland scarcer. Excessive use of pesticides, fertiliser and irrigation have poisoned and depleted soils and groundwater. But the biggest reason may be global warming.

Rice is particularly susceptible to extreme conditions and is often grown in places where they are increasingly evident. Patchy monsoon rains and drought last year in India, the world's biggest rice exporter, led to a reduced harvest and an export ban. Devastating floods in Pakistan, the fourth-biggest exporter, wiped out 15% of its rice harvest. Rising sea-levels are causing salt to seep into the Mekong Delta, Vietnam's "rice bowl".

It gets worse. Rice is not merely a casualty of climate change, but also a contributor to it. By starving soils of oxygen, paddy cultivation encourages methane-emitting bacteria. It is a bigger source of greenhouse gas than any foodstuff except beef. Its emissions footprint is similar to that of aviation. If you count the conversion of forestland for rice paddy—the fate of much of Madagascar's rainforest—that footprint is even bigger.

This amounts to an insidious feedback loop and, in all, a far more complicated set of problems than the food insecurity that spurred the green revolution. Indeed, eating too much rice turns out to be bad for people as well as the climate. White rice is more fattening than bread or maize, and is not especially nutritious. In South Asia rice-heavy diets have been linked to high rates of diabetes and persistent malnutrition.

Policymakers need to increase rice yields, then, but more selectively than in the 1960s. In the places most suitable for rice cultivation, such as hot and sticky South-East Asia, faster adoption of new technologies, such as flood-resistant and more nutritious seeds, could provide a big productivity boost. In tandem with improved practices, such as direct seeding of paddy, they could also shorten the growing cycle and reduce the amount of water required, mitigating environmental harm. Farmers have been slow to adopt such improvements, partly because of overgenerous subsidies that shield them from the rice crisis. A better approach would make state support contingent on best practice. By encouraging crop insurance—a good idea in

itself—governments could also help reassure farmers as they switch from old ways to new.

Governments need to nudge producers and consumers away from rice. India and Indonesia are promoting millet, which is more nutritious and uses a lot less water. Scrapping subsidies that favour rice over other crops would make such efforts more effective. India, for example, procures rice from farmers, often at above-market rates, then distributes it as food aid. It should make its interventions more crop-agnostic, by replacing subsidies and free rice with income support for farmers and cash transfers for the poor. That would encourage farmers to choose the best crop for their local conditions—much of India's agricultural north-west would switch from rice to wheat overnight. Poor Indians would be free to choose a more balanced diet. Thereby, it would correct a market skewed towards environmental damage and poor health.

Bringing about such change in Asia and beyond will be far harder than promoting new wonder seeds was. Farmers are almost everywhere a powerful constituency. Yet policymakers should get used to blending complicated economic and technological fixes in this way. Increasingly, it is what fighting climate change will entail. Sorting out the mounting crisis in the world's most important foodstuff would be a good place to begin. ■

For more coverage of climate change, sign up for The Climate Issue, our fortnightly subscriber-only newsletter, or visit our climate-change hub.

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Constitutional crisis

Israel should not squander the opportunity for meaningful constitutional talks

The government’s retreat has pulled Israel back from the brink. But its people remain deeply divided

Mar 30th 2023



ISRAEL’S CITIZENS have won a rare victory after marching, week after week, to defend judicial independence and the character of their democracy. On March 27th they forced their prime minister, Binyamin Netanyahu, to suspend his plan to rein in the courts. Yet, although the crisis has abated, it has not passed.

The danger now is that, hoping the protesters’ fervour has cooled, Mr Netanyahu and his extreme right-wing and religious coalition partners try to force through his laws with only cosmetic changes in May, in the next session of the Knesset. That would almost certainly reignite the conflict. If right-wing parties called out their supporters, violence could erupt. To heal their divisions, Israelis must take this chance to resume the constitutional talks they put on hold 73 years ago.

The protests that halted Mr Netanyahu's legislation have few precedents in Israel. Organisers claim that, at their peak, almost 7% of the population joined demonstrations. The anger was amplified by, in effect, a strike by thousands of elite soldiers and pilots in the reserve units that make up much of Israel's combat power. When Mr Netanyahu said he would sack the defence minister for warning of the threat this posed to national security, actual strikes closed the ports, grounded flights and shut embassies. The uproar, fuelled by the fact that Mr Netanyahu himself faces corruption charges, left him with little choice but to pause his legislation and to call for talks instead.

This alone should cheer liberals and democrats everywhere. Viktor Orban in Hungary, Andrzej Duda of Poland and Recep Tayyip Erdogan in Turkey all weakened or politicised their courts as a prelude to ramming through illiberal policies. In India a court recently convicted Rahul Gandhi, an opposition leader, over a campaign speech, leading to his exclusion from parliament.

How to turn this opportunity to Israel's advantage? This crisis has been long in the making. Even before independence the country's founders fell out over constitutional principles such as the role of religion in the state and the protection of minorities. Instead of facing up to these, David Ben-Gurion, the first prime minister, left it to future parliaments to pass "basic" laws. A constitution was supposed to emerge from these gradually but it never has. Instead the courts eventually came to imbue these laws with special authority. Many right-wing and religious Israelis believe that today's system is rigged against them, and that democracy is thwarted when judges overturn laws passed by elected politicians. The status quo is as unacceptable to them as Mr Netanyahu's reform is to their opponents.

The remedy is as easy to propose as it will be hard to carry through. The lesson from the past few weeks for Mr Netanyahu and his allies is that a reform which is quasi-constitutional requires a broad political consensus if it is to endure. For the protesters the lesson is that demographic and political trends have tilted electoral power towards religious Israelis and will continue to do so. They need to compromise, too.

Israel finally has a chance to resolve old and fundamental questions through an orderly process. To succeed, both sides will have to make uncomfortable concessions. Secular and liberal Israelis may have to guarantee privileges and protections to ultra-Orthodox Jews (who do not serve in the army, for instance). In return, religious parties may have to respect civil liberties by relinquishing religious control over institutions such as marriage. All will have to settle on an appropriate level of restraint on majoritarian rule. If the best constitutions are made to endure hard times, then perhaps there is no better moment to forge a new one than the crisis in Israel's streets today. ■

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Undead finance

America risks propping up zombie banks

The banking crisis may have calmed, but only because of a government backstop

Mar 30th 2023



FROM THE calm of financial markets, it may seem as if America's banking crisis is over. No more lenders have failed since March 12th. Banks' stock prices appear to be settling at about a quarter beneath their level at the end of February. Policymakers are no longer fighting financial fires, but are telling congressional hearings about the lessons to be learned. President Joe Biden says the administration has done "a pretty damn good job".

Yet America is far from solving the problems in its small and midsize banks. The markets are tranquil mainly because the federal government is backstopping the system. That means the economy could yet face a slower-burning crisis instead.

The underlying problems are plain to see. As of March 15th, banks other than the biggest 25 institutions had lost $141bn of deposits this year, equivalent to nearly 5% of those not covered by federal deposit insurance (which is capped at $250,000 per customer). Banks with nearly $4trn in

combined assets have unrealised losses worth more than half of their core equity safety cushions. For smaller banks, losses on commercial-property loans could wipe out still more of the buffer . Some lenders' losses are probably far worse.

Calm prevails because of generous and indiscriminate support for the banks. By March 22nd the Federal Reserve had lent $164bn via facilities that issue loans worth more than the securities posted as collateral. According to Barclays, the Federal Home Loan Banks, lenders with an implicit government backstop, may have advanced $300bn to banks in a single week.

The Fed and the Treasury have also strongly hinted that they will bail out uninsured depositors should other banks fail, as they did the customers of Silicon Valley Bank (SVB). The Federal Deposit Insurance Corporation (FDIC) has promised to set out options for expanding its guarantees by May 1st. It expects the bail-out of SVB's depositors to cost $20bn, a record in cash terms.

These measures have apparently succeeded in slowing deposit flight. But the propping up of banks with unrealised losses brings fresh problems of its own. The danger is that they become zombies which keep capital tied up in unproductive legacy assets—a problem that last struck America in the 1980s, plagued Japan in the 1990s and troubled Europe in the early 2010s. One risk is that zombies try to restore their capital ratios by lending less. Another is that they put off recognising losses that may yet materialise on their loan books as higher interest rates bite. First Citizens Bank is now buying $72bn of SVB's loans at more than a 20% discount, suggesting that it foresees defaults ahead. The consequences of ignoring losses can be severe: in Japan it contributed to a "lost decade" of economic growth.

Avoiding zombification requires quickly recognising losses and infusing banks with fresh capital. When calculating their safety buffers, megabanks must mark to market much of their securities portfolios; smaller banks ought to be required to do the same. Policymakers should use stress tests to work out what would happen to banks' capital cushions if all their unrealised losses were to crystallise during a run, and if interest rates rose further. Banks that look too risky should be made to recapitalise by suspending

dividends, and discouraged from trying to improve their capital ratios by lending less.

All this would hurt shareholders. The danger is therefore that the lobbying of smaller banks stalls the agenda. Nearly 5,000 are spread around the country, and many have the ear of their local congressional representatives. In 2018 Congress watered down the rules governing smaller banks' minimum liquidity and crisis-planning. Many policymakers argue that smaller banks are vital for their local knowledge and as a source of competition—a sentiment Janet Yellen, the treasury secretary, recently voiced to the American Bankers Association. That is true, but a further reason to avoid looser rules and zombification.

A crucial test will be whether the Fed closes its emergency facility as planned in March 2024. If it is extended, and if Congress expands deposit insurance without trying to fix the underlying problems in the banks, then zombies could proliferate. Worryingly, even with prolonged support in place some banks may not have a route to profitability, and might take big risks to be resurrected, in effect gambling with taxpayer money. Banks are supposed to circulate trillions of dollars of capital around America, but they could yet become a drag on the economy. ■

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Secession, season 1

The Scottish National Party's limitations have been laid bare

Will Humza Yousaf learn the right lessons?

Mar 29th 2023



WHO NEEDS HBO when you can watch the SNP melt down? A vicious battle to take the place of an all-powerful Scottish leader has turned "Succession" into must-watch television. The fight to succeed Nicola Sturgeon as leader of the Scottish National Party (SNP) had the same plot line and the same mix of underwhelming pretenders and fratricidal ambition. The successor in the real-life drama is now known. Humza Yousaf, previously the health secretary, this week became the new head of the SNP and Scotland's first minister. But the party he leads suddenly seems as dysfunctional as Waystar Royco.

That is a remarkable shift. The SNP is an election-winning machine. Ms Sturgeon, who had led the party since 2014, masterminded eight ballot-box wins in eight years. Under her and her predecessor, Alex Salmond, the cause of Scottish independence went from a fringe pursuit to the defining question of politics north of the border. But the past few weeks have seen the party's

reputation for discipline implode and the goal of statehood recede further into the distance. For the sake of all Scots, not just those who want secession, Mr Yousaf needs to reflect on the limitations of the Sturgeon era. They hold lessons for politicians elsewhere, too.

One is that an imperial leader will eventually become a problem. Ms Sturgeon dominated her party to such an extent that she stifled debate. In her resignation speech on February 15th, she acknowledged that her views warped those of others. A tight coterie ran things: her husband was the party's chief executive until he resigned over revelations during the campaign that the SNP's membership was smaller than billed. Worse, she operated within a political set-up that imposed few constraints on her. The Scottish Parliament in Holyrood has no second chamber; parliamentary committees are less independent than in Westminster. Thorough scrutiny is missing, as shown by her gender-recognition reforms, which owe more to dogma than design.

Another limitation is polarisation. Ms Sturgeon left office with a string of homilies about the need to practise a less confrontational form of politics, the equivalent of Logan Roy giving a sermon about forgiveness. On her watch the Scottish electorate bifurcated. According to polling for *The Economist*, support for, or opposition to, independence predicts Scots' attitudes to pretty much everything else. This tribalism helped the SNP win all those elections. And outside Scotland, polarisation of a different kind helped Ms Sturgeon: a certain type of liberal ignored the ideological fanaticism, economic recklessness and predilection for alternative facts of nationalist campaigns and saw in her only a progressive Remainer. In fact, her all-consuming "us" and "them" approach made it hard for the nationalists to win over voters from the other camp.

That matters because of the SNP's last limitation: monomania. The Westminster government and the Supreme Court have stymied hopes of a second independence ballot to follow the failed one in 2014. With roads to that destination blocked, the party is increasingly bound to be judged on things that matter more to voters' daily lives. And that record is pretty mediocre. Death rates from drug misuse match those in opioid-addled America. Scotland's schools lag behind the rest of Britain's. The ferry services to the Scottish islands are an embarrassment.

Charisma, tribalism and taking back control can go a long way. They are the ingredients that brought about Brexit. But, as Brexit's poisonous aftermath showed, they are also a recipe for gridlock and fragility. If Mr Yousaf can govern more consensually and competently, he would serve all Scots better. And although this newspaper does not share his goal of independence, he would also help the nationalist cause. As yet, the vote for independence is not large or sustained enough to force another referendum. A divorce between England and Scotland would make Brexit look simple, but the SNP has not shown itself capable of thinking through its complexities. Good government rather than slogans is the way for the party to win doubters round.

Whether Mr Yousaf is the person to change the SNP's approach is debatable, however. His margin of victory was narrow and he may be tempted to double down on promises of independence as a way to suppress party divisions. His own record in government is one of serial underperformance, a kind of tartan Tom Wambsgans. Kate Forbes, his main rival, has already gone to the backbenches rather than accept his offer of a cabinet demotion. Mr Yousaf's new deputy is an old friend of Ms Sturgeon's and the architect of the gender-recognition reforms. Season two of "Secession" has been set up nicely. ■

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Letters

- **Letters to the editor**

On colonialism, planting trees, Taiwan, Japan and South Korea, megaprojects, the Moon, Bibi

Letters to the editor

A selection of correspondence

Mar 30th 2023



Letters are welcome via e-mail to letters@economist.com

Nigel Biggar responds

Your review of my book, "Colonialism: A Moral Reckoning", judged it to be "often foolhardy and sometimes just banal" ("The sun never sets", March 4th). First, you tell us that plenty of people "in Britain's former colonies have long regarded the British Empire as racist and exploitative, even genocidal". Sure, but the subjects of British rule didn't all think the same thing. For example, Chinua Achebe, the African nationalist man of letters, refused to condemn British colonial rule shortly before he died in 2013.

Next, your review was astonished that exhibit A in my case for the growing humanitarianism of the British Empire is "the slave trade". Of course, my prime exhibit is the fact that Britain was among the first states in the world's history to abolish the trade and slavery itself. You then emphasise the role of

slave rebellions in bringing about abolition. I acknowledge that on page 56. But until you can present a cogent argument that the humanitarian revolution in British mores, which gathered steam decades before the 1791 slave-revolt in Saint Domingue (now Haiti), did not play a leading role in securing abolitionist victories in Britain's Parliament in 1807 and 1833, my case stands.

Correctly, you point out that "in some analyses" Britain's subsequent investment in suppressing slavery worldwide was intended to stop slaveholding economies undercutting British exporters, now reliant on free labour. But human actions usually spring from several motives and sometimes genuinely humanitarian motives really do dominate economic ones. You also claim that I argue that the empire was not "wantonly violent". That is untrue: I admit it was—sometimes.

Finally, you find "lazy and banal" my point that the empire was like any long-standing state in harbouring evils and injustices. But that was merely the elementary stage in the larger argument, clearly stated in the Conclusion, which you overlooked. That concludes that the British Empire wasn't "essentially" racist and murderous and that it contained growing humanitarian and liberal elements, which found climactic expression when, between May 1940 and June 1941, the empire stood alone (with Greece) as the only military opposition to the massively murderous racist regime in Nazi Berlin.

NIGEL BIGGAR
Oxford



Paying people to plant trees

The notion of paying the owners of rainforests not to destroy them ("Cash for climate services", March 4th) brought to mind the late, great Wangari Maathai, a Kenyan environmentalist. It was while visiting some of Kenya's poorest areas that Maathai saw how environmental degradation had affected the lives of rural women. In 1977 she founded the Green Belt Movement. Women were brought together to plant seeds, store rainwater, reduce soil erosion and provide food. For each tree planted, they would earn a small allowance. By 2004, the year Maathai became the first African woman to win the Nobel peace prize, the movement had planted more than 30m trees. It shows that empowering a community can achieve a lot. And also that payments for climate services works.

MBURU GATONYE
Nairobi

Taiwan's energy problem

Another issue that vexes those who want to see Taiwan thrive is its energy policy (Special report on Taiwan, March 11th). The island has rushed headlong towards adopting natural gas to power its electricity grid, spurning

coal and nuclear power. For all its economic advantages, natural gas presents grave risks to Taiwan because of the country's precarious geopolitical status. All of its natural-gas supply is carried by tankers that dock at two terminals on its exposed west coast. A third terminal is due to be completed by 2025. A fourth location is under discussion; fulfilling Taiwan's electricity-generation needs would require that fourth terminal, and possibly a fifth.

Natural gas is dependent on just-in-time delivery, exacerbating the island's vulnerability to a blockade that many military experts now consider to be China's most probable method to subdue Taiwan. Whereas coal and nuclear enable about 18 months of on-site storage, Taiwan can hold just two weeks' worth of natural gas without a huge commitment to build more infrastructure. Reducing coal reflects important environmental concerns, but the elimination of nuclear power from Taiwan's mix is a dangerous misstep.

JORDAN MCGILLIS
Policy analyst
Manhattan Institute
New York



You mentioned a lack of will in Taiwan to defend the island. Some historical background may explain this equivocal attitude. The people of Taiwan have

been forced to identify with different nationalities over the past two centuries. As a colony of Japan from 1895 to 1945 the Taiwanese were coerced into identifying as Japanese. Then came the Chinese nationalists led by Chiang Kai-shek, who, defeated by the Chinese Communists, ruled Taiwan under martial law for nearly four decades. During this time the Taiwanese had to learn a new language, Mandarin, and identify as Chinese. Only after the lifting of martial law in 1987 did the idea of a Taiwanese identity start to circulate, and it took time to be adopted.

The formal name of the country is still the Republic of China and its Olympic team is represented as Chinese Taipei, names that the global powers support in order to maintain the status quo in the Taiwan Strait. Fewer and fewer countries formally recognise Taiwan each year. Given all this it is hard for the Taiwanese to be optimistic about their collective destiny. They feel powerless about sustaining their national identity in an acquiescent world.

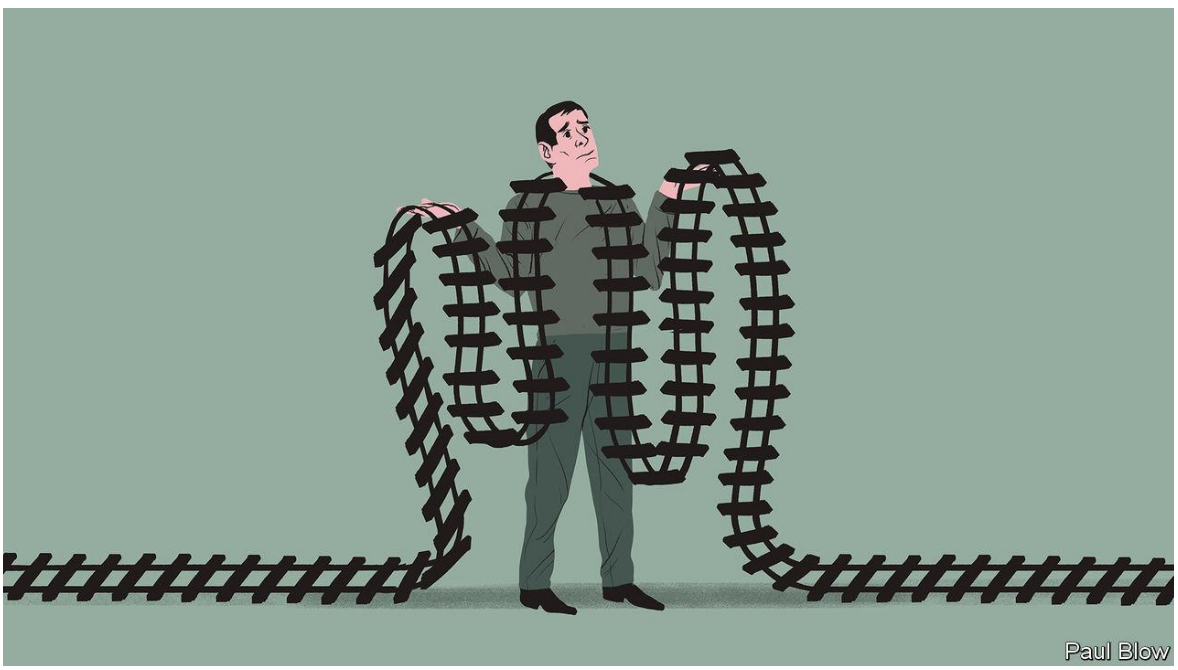
DENIS WU
Weston, Massachusetts



Japan and South Korea

When I was first posted to Seoul in 1975 diplomatic relations between South Korea and Japan were only ten years old, and were at best bumpy. Now, after decades of continued bumpiness, the decision by South Korea to seek a positive, forward-looking relationship with Japan should be applauded ("Litigating history", March 11th). There is so much the two neighbours have in common, and so much they can achieve by closely working together, not just for mutual benefit but for the region and beyond, especially on foreign- and security-policy issues with North Korea and China in mind. It is understandable that some South Koreans may be upset, but it is to be hoped that they will accept that although the past is important, it should not be allowed to shape the relationship between two such successful and important countries in a changed world.

WARWICK MORRIS
British ambassador to South Korea, 2003 to 2008
Langton Green, Kent



Britain's nutty megaprojects

Bartleby put his finger on the key problem with megaprojects: we never learn from past mistakes and let politics trump prudence (March 18th). The prototype of all modern megaprojects in Britain was the groundnut scheme.

It was launched in 1947 by Clement Attlee's Labour government to transform African agriculture and solve Britain's post-war shortage of oils and fats by developing a 3m-acre fully mechanised peanut farm in the middle of what is now Tanzania. It failed so spectacularly that it helped bring down the Labour government in 1951. It cost £36m (equivalent to £1bn today) and imported more groundnuts as seed than it ever exported.

Haste, hubris, political deadlines and ignoring the experts all played their part. But these lessons were swiftly forgotten, and so we have suffered one groundnut scheme after another since then. The HS2 high-speed rail project is merely the latest in a sadly long line.

NICHOLAS WESTCOTT
Professor of practice in diplomacy
School of Oriental and African Studies, University of London



Living underground

The idea of using caves on the Moon as viable living spaces is not new ("Lunar living", March 18th). Robert Heinlein's science-fiction novel "The Moon is a Harsh Mistress", published in 1966, describes a lunar colony based in pressurised subterranean caves. As suggested in your article, the

caves provided protection from solar radiation as well as allowing access to whatever resources might be available.

ROBERT CHECCHIO
Dunellen, New Jersey


Mark Harris/Alamy

For the sake of five

Israel's constitutional crisis ("Will Bibi break Israel?", March 18th) could be resolved by taking a lesson from the biblical story of Sodom. Abraham gets God to agree that the presence of just ten righteous people would be enough to save the entire city. In Israel today, if just five Likud members of the Knesset were to break away from the governing coalition they could end Binyamin Netanyahu's march towards undemocratic judicial reform.

The biblical story ends with the destruction of Sodom, implying that not even ten righteous people could be found. Time will tell if the Likud has five righteous members willing to challenge the prevailing powers, just as Abraham once did.

PAUL GREENBERG
Brookline, Massachusetts

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By Invitation

- **Politicians and the IMF are failing Pakistan’s most vulnerable, laments Murtaza Syed**

Pakistan and the IMF

Politicians and the IMF are failing Pakistan's most vulnerable, laments Murtaza Syed

A former central banker on the coming chaos in his country and what to do about it

Mar 28th 2023



THE PROBLEMS OF Pakistan are encapsulated in the lives of two people I have met in recent months. Mariam Bibi still lives with her five children in a makeshift tent beside the Indus River in north-west Pakistan, eight months after their lives were turned upside down by extensive flooding. Even finding enough to feed and clothe her children is problematic. There are 30m poor people like her in Pakistan who are still feeling the effect of the floods.

Asif Zaman is a designer at an advertising agency in Karachi. Despite having an undergraduate degree, he makes less than $4 a day. Over the past year, the cost of his groceries and bills has shot up because of soaring inflation and a 60% depreciation of the rupee. There are 45m lower-middle-class people who are struggling like him.

The country's economic crisis has brought it to the brink of default. Pakistan's politicians and the IMF are failing people like Mariam and Asif, and the consequences of this could be disastrous.

It did not have to be this way. Scarcely 18 months ago, Pakistan was doing relatively well. It handled covid-19 successfully, keeping casualties and economic fallout to a minimum. The pandemic saw public debt soar across the world, but it fell in Pakistan as a result of commendable fiscal discipline. Foreign-exchange reserves rose to all-time highs of over $20bn.

But at the end of 2021, with a large amount of external debt coming due over the next few years, the government had no choice but to resume the IMF programme that had been paused due to covid-19. Everybody knew it was the only way for Pakistan to meet its external payments.

This is when policymakers took some reckless decisions. Amid political instability, a populist energy subsidy created a fiscal hole of 1.5% of GDP. More recently, the rupee was artificially propped up through curbs on imports, bringing many industries to their knees. No attempt was made to reduce wasteful government spending or energy usage, nor to win back external creditors who dumped Pakistani assets, unnerved by irresponsible comments from policymakers. As a result, foreign-exchange reserves have today been nearly depleted and the currency has tanked.

The IMF has watched Pakistan commit *hara-kiri* with bemusement. Although it now appears willing to help pull the country back from the abyss by reviving its lending programme, the Fund is also complicit in some grave mistakes.

First, despite all the talk of putting the burden of adjustment on the rich, the main fiscal response the Fund has agreed with the government is an increase in the sales tax—a highly regressive measure. There is not even a hint of taxing property (an unproductive asset where illicit wealth is frequently stashed), agriculture (which is dominated by large landlords) or the retail sector (home to most of Pakistan's *nouveaux riches*). This is a historic opportunity missed to broaden the tax base in a progressive way.

Second, the only real protection being offered to the poor is through BISP, a cash-transfer programme covering 9m families who live on less than 70 cents a day. They will receive an extra 30 cents per day. In a country where 40% of the population—90m people—earn less than the World Bank's middle-income poverty line and where inflation is running at a 50-year high of 30%, this protection is little more than cosmetic.

Third, the government and the IMF are pretending that Pakistan's public debt is sustainable. Pakistan has external financing needs of $35bn in each of the next five years, against foreign exchange reserves of just $4bn. During this time, the government will need to pay 5% of GDP each year in interest payments on the debt it owes to residents and foreigners. Our total tax take is only 10% of GDP. If ever a country needed debt relief, it is Pakistan. Denying this is a recipe for disaster. The austerity it would necessitate could spark major social unrest.

And fourth, the IMF is faltering in its traditional role as lender of last resort. Instead of helping to round up creditors, it has asked Pakistan to do so on its own, reflecting the IMF's weakened role at the heart of the global financial safety net as new creditors, like China, have emerged. Even the World Bank is no longer automatically coming to the rescue, though the IMF has approved Pakistan's policies.

So where to from here? The IMF programme needs to be revived immediately. Flexibility is needed on both sides. Next, debt relief must be delivered despite the obvious co-ordination difficulties. Last, the most vulnerable must be protected while shifting the burden of austerity onto the rich.

Beyond this immediate relief, Pakistan must start to tackle the underlying maladies that have led it to the IMF a record 23 times: a low tax take, faltering exports and abysmal levels of investment in human and physical capital. A good place to start would be to redefine its social contract. This will require Pakistan's elites to put aside their differences and finally gamble on economic development. In turn, the global community can help by providing a conducive environment for Pakistan's exports and by investing in the country. The hour is late. The poor and vulnerable, like Mariam and Asif, cannot wait much longer.■

Murtaza Syed recently served as acting governor of the central bank of Pakistan and was previously an official at the IMF.

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Briefing

- [America’s commercial sanctions on China could get much worse]

A daunting arsenal

America's commercial sanctions on China could get much worse

And China could retaliate in kind

Mar 30th 2023 | Beijing



THE CHINESE custom official's suspicions were first aroused by the size of the woman's stomach. She said she was only five to six months pregnant, yet her belly protruded as if she were close to term. When she was searched, her baby bump turned out to be fake. Inside an improvised pouch she was smuggling not drugs or weapons, but computer chips—202 of them. Since America imposed a ban on sales of certain semiconductors and related equipment to Chinese entities last year, firms in China have been running short. Imports have plunged (see chart 1). Entrepreneurial middlemen (and women) have been coming up with all manner of schemes to obtain the desired goods, and to avoid customs duties to boot.



The Economist

It is not just small operators who are feeling the effects of the sanctions. Before the new rules were imposed in October, Yangtze Memory Technologies Corp (YMTC), a big state-owned maker of memory chips, was widely seen as the Chinese firm with the best chance of becoming a global force in chipmaking. Overnight, however, it and all other Chinese firms were barred from buying the equipment they needed to make the most advanced chips. YMTC's inability to procure this gear, in turn, has stopped it from finalising a business plan for 2023, analysts say. It may have to delay the construction of a new production facility.

The impact is reverberating through supply chains. YMTC cannot build production lines with foreign components, which means it is having to cancel orders for Chinese equipment, too, that would have gone into the same lines. It has reportedly cut orders from one local firm by 70%. It may in time be unable to fulfil orders for chips from Chinese customers. In January it began laying off workers and asked former staff to repay generous housing subsidies. Disgruntled former employees claim it is desperately trying to save cash and that its troubles stem from the sanctions.

The ultimate effect of all this will be to set back China's chip industry. International Business Strategies, a consultancy, had previously estimated that Chinese firms would be making more than half of the chips their

country needed by 2030. After the American sanctions came into effect, it lowered that forecast to 33%.

This is just what America's policymakers want. The latest sanctions are different from past measures against China, Russia and, during the cold war, the Soviet Union. They seek to deny China access not just to advanced weapons or narrowly defined technologies, but to undermine whole industries. In a speech in September Jake Sullivan, America's national security adviser, explained that the government wanted to hobble China's capabilities in "foundational technologies" such as artificial intelligence, biotech and clean energy, to allow America to maintain as much of an edge as possible in these areas. Some call this plan the "Sullivan doctrine".

FDPRgy-bargy

So far, America's main technique for hobbling Chinese industry has been export controls using "foreign direct product rules" (FDPRs). These orders, issued by the Department of Commerce, can be used to restrict the sale not just of goods made in America but also of any item made anywhere using American intellectual property. Firms that break the rules risk prosecution if they do business in America and crippling sanctions even if they do not.

The FDPR that has spurred chip-smuggling and upended YMTC was issued in October. In keeping with the Sullivan doctrine, it attempts to cut China off from the most advanced chips involved in the machine learning that underpins all AI. It also bars American engineers, and even Chinese nationals with American green cards, from working at many Chinese chip companies. This abrupt escalation, says Joerg Wuttke of the European Union Chamber of Commerce in Beijing, was tantamount to "a declaration of tech war".

In fact, the war had already begun. America has been cudgelling Huawei, a Chinese tech firm, with various weapons, including an FDPR, since 2019. Donald Trump, the previous president, attempted to force ByteDance, another Chinese firm, to sell TikTok, an app adored by teens around the world. But America's assault is clearly intensifying. Congress has been loudly debating a ban on TikTok. The mandarins of the commerce department and the Treasury have many more potential sanctions up their

sleeves. China, meanwhile, will not sit idly by as its industries are pummelled. And, as in any conflict, bystanders are being pulled into the fight.

How far will the battle escalate and how severe will the damage be? At the very least, the fighting will force a drastic reorganisation of supply chains in the $570bn market for computer chips. It may well spill into other industries such as clean technology, biotech and even agriculture. It will in effect split the world into two distinct and mutually exclusive blocs for many products, and thus undo many of the gains brought about by globalisation. And it will harm the companies and countries that are forced to choose between the two rivals.

Processing oriented

The next salvo is likely to be a strengthening and widening of the new export rules. The FDPRs on chips focus on two factors: processing power and the speed at which they communicate with other chips. Although in theory Chinese firms could get around these twin restrictions by using lots of less sophisticated chips, that would make it very cumbersome and expensive to train large AI models. But the performance of chips is always improving, and algorithms used for training are becoming more efficient. This means that the sanctions will gradually lose their potency, as more can be done with less.

Such advances may prompt America to modify its sanctions on chips, says Bill Drexel of the Centre for a New American Security (CNAS), a think-tank in Washington. It might choose to focus purely on the computational power of chips. This is a simpler approach than trying to find a “sweet spot between computing power and interconnect bandwidth”, says Mr Drexel. But it would entail broadening the restrictions to less powerful chips. That could ensnare the graphics-processing units used in the video-games industry, a rapidly growing market worth $40bn last year. Both American chipmakers and their Chinese customers would suffer.

The commerce department might also target other industries with FDPRs. Chinese biopharmaceuticals, an industry with projected sales of more than $100bn by 2025, are highly dependent on American intellectual property.

American firms supply lots of biological materials, technical information and lab equipment to Chinese facilities which produce new medicines and therapies, notes Ajay Kuntamukkala of Hogan Lovells, a law firm. Some of these exchanges could be banned. One possible target is American-developed software that Chinese companies use to make medicines that are then exported back to America. Many companies in the West also export data to China in order to develop new treatments. In future, such transfers of data could also be restricted, notes Emily Benson at CSIS, another think-tank.

Another option the American government is weighing is an expansion of FDPRs on companies. The test case for this is Huawei, which continues to operate despite an array of American sanctions. One of its subsidiaries, Kunpeng, makes servers used in data centres and licenses its designs for central processing units (CPUs) to several Chinese tech firms. Those groups are still able to buy kit from Intel and AMD, two American companies, and chipsets from TSMC, a Taiwanese chipmaker. But America could add these Huawei suppliers to the "entity list" of blacklisted firms, impeding the expansion of Huawei's data centres.

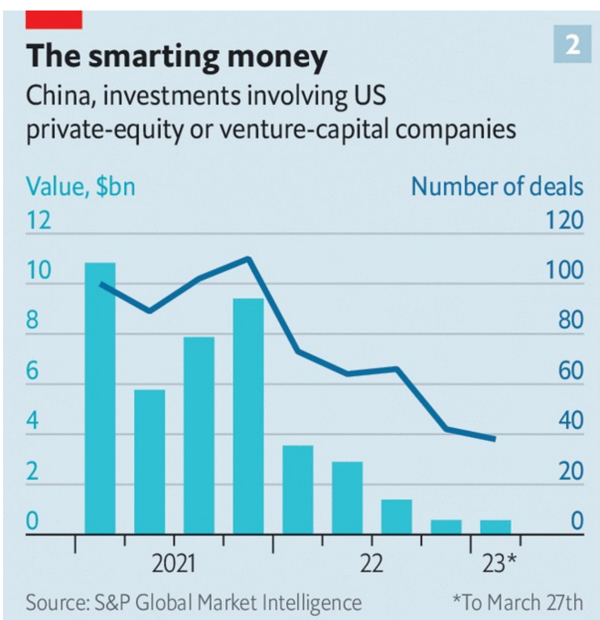
Other big Chinese conglomerates with global holdings could also get dragged into the fight. In early March America's Department of Agriculture announced it would form a working group to promote fair competition in the seed industry. The value of bonds issued by Sinochem, a Chinese agro-industrial group, fell on the announcement, owing to fears that the new body could recommend restrictions on its seeds. This is a frightening prospect for China Inc, which has spent years acquiring technologies overseas and, more recently, bringing intellectual property to America and Europe. Sanctions against Sinochem could devastate the operations of Syngenta, a Swiss agribusiness giant that it bought in 2017 for $43bn.

Some industries in Mr Sullivan's sights will be hard to injure with FDPRs. China's nascent quantum-computing firms, for instance, rely very little on American-made equipment or intellectual property. But Chinese researchers in the field do collaborate energetically with their American counterparts. American quantum-computing specialists write more papers with Chinese ones than with people from any other foreign country, notes Edward Parker, a scientist at the RAND Corporation, an American think-tank. Hence the

significance of another of the commerce department's munitions: "deemed export" controls, which prohibit the disclosure of certain types of technical information to foreign nationals, even on American soil.

America may also place limits on capital flows in its attempt to stifle certain Chinese industries. It is already illegal for American people or companies to provide funding to firms suspected of close ties to China's armed forces. But American financial sanctions could get much fiercer. The Treasury is unlikely to try to cut China off from the use of the dollar altogether, as it has Iran, for example—at least unless relations deteriorate much more. But American authorities are trying to refine and develop the use of the dollar as a weapon in international relations. Observers expect the Treasury may soon try to ban the use of dollars to invest in some advanced technologies in China.

All these measures, however, have drawbacks. Barring Americans from collaborating with foreigners in research on quantum computing, for instance, would set back the American industry as well as the Chinese one, by preventing it from recruiting talented foreigners.



The Economist

By the same token, restricting American investment in Chinese technology would have only a limited effect. The growing hostility between China and

America and the closing of China's borders for nearly three years during the pandemic have already crimped the flow of investment (see chart 2). American money is no longer that important to China's venture-capital industry, says Alexander Kremer of Picus Capital, an investment group. Anyway, American regulators would struggle to enforce sweeping financial restrictions. Monitoring every dollar fund based in Hong Kong and in offshore havens such as the Cayman Islands is probably beyond them, at least without a massive increase in staff and resources.

And then there are the repercussions for American firms. China's airlines are reliant on imported planes and parts, many of them American. America could therefore bring aviation in China to a standstill with a sweeping FDPR—a prospect that alarms Chinese officials. But such a move would probably also provoke a crisis at Boeing, a giant American aircraft-maker.

Artful dodgers

What is more, China will also eventually find ways around whatever new restrictions America lobs at it. The phoney baby bump is a crude form of evasion, but there are more sophisticated ones, culminating in the development of a domestic capacity to replace whatever America's regulators have withheld. Huawei is a good example. Its telecoms-equipment and smartphone divisions have been dealt savage blows by its regulatory pounding. But a recent speech by its founder, Ren Zhengfei, described the company's attempt to push foreign IP from its systems. So far, Mr Ren claims, it has secured domestic supplies of 13,000 components and redesigned 4,000 circuit boards. Most strikingly, in April it will launch its own enterprise-resource-planning (ERP) system, the software that underpins operations across the corporation. (Until now it has used one developed by Oracle, an American software firm.)



The new system is meant to "plug all the holes" created by the many American strictures on Huawei, say analysts at Jefferies, an investment bank. The ERP system was developed alongside a home-grown operating system that has helped further diminish ties with foreign suppliers.

These substitutes are expensive to develop and may not prove as good as the systems they replace. But China's Communist Party is undaunted. "Self-reliance" in science and technology is one of the top priorities of Xi Jinping, China's leader. His government has poured funding into semiconductor development, among other technologies. Much of the money has been wasted—but not all. For example, China uses lots of SerDes circuits, vital components that connect chips, and that were mainly produced by foreign firms until recently. But local manufacturers have learned to make them relatively quickly, says Hexigetu of Sincere Capital, a private-equity firm based in Shanghai. American sanctions may end up spurring the very thing they are intended to impede: the development of strategic Chinese industries.

Meanwhile, the fiercer America's restrictions become, the more businesses around the world wince. Many businessmen and some foreign governments complain that America is rewriting the rules of globalisation at great cost and to little benefit. Western corporations have been forced to think about

their operations in China more like stand-alone, ring-fenced entities with fewer and fewer links to their research departments elsewhere. The looming threat of future sanctions means executives are putting off big decisions on investments and hiring. Chinese tech firms, too, are likely to delay investment and expansion in Western countries while they wait to see what happens to TikTok.

America is moving so quickly that it has not always managed to persuade its allies to form a united front. The FDPRs issued in October, for instance, were announced before it had secured the support of the Netherlands, South Korea and Japan. Yet these countries make lots of advanced chips and chipmaking equipment. If they do not go along with America's new rules, the attempt to blockade China will fail.

After the announcement American officials did elicit reluctant agreement from the Dutch and Japanese governments to adopt similar measures, even though they will be painful for ASML, a Dutch manufacturer of chipmaking equipment, and several big Japanese firms. South Korean firms have been granted a one-year reprieve but will eventually have to comply, according to reports. South Korea exports about half of its memory chips to China, notes Sam Howell at CNAS. Samsung and SK Hynix, two big South Korean chipmakers, have invested billions of dollars in manufacturing facilities in China. They risk penalties from America if they do not fall into line, and from China if they do. America's vast sanctions programme faces many such hurdles, Ms Howell notes.

China has so far refrained from dramatic retaliation. Its leaders are happy to see big American firms such as Apple expanding in their country. On his first trip to China in three years, Apple's chief executive, Tim Cook, sought to allay fears of an economic decoupling between America and China. He told an audience in Beijing on March 25th that the "symbiotic" relationship between the two countries over the past 30 years has helped them both grow.

China's commerce ministry, however, is said to be mulling a ban on exports of some advanced silicon wafers used in solar panels, which would hurt many American firms. (It would also be devastating to Chinese exporters.) Perhaps a likelier target is biotech, since lots of American companies have an "uncomfortable dependency" on China for pharmaceutical inputs and

medical devices, says Reva Goujon of Rhodium, a research firm. Some of the ingredients used in antibodies for anthrax, for instance, are produced only in China. The more sanctions America announces the greater the risk of a tit-for-tat cycle.

Critics of America's approach say that it is not just harming its own companies, but also hindering the development of technologies that will benefit all humanity. It will certainly raise costs for companies in the affected industries. The sanctions drive also risks making America look like a bully. Preventing Chinese nationals from participating in high-level quantum-science research might slow the development of quantum computing in China, notes Mr Parker, but it would also erode the notion of American openness. "I was totally shocked," says a Chinese economist of the FDPRs imposed in October, "It goes against everything I was told: free trade, a rules-based order, open competition." ■

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Asia

- **The global rice crisis**
- **The world’s biggest democracy is becoming less free**
- **Middle-class Sri Lankans are fleeing their country**
- **In much of Asia, race is just too hard to talk about**

Agriculture in Asia

The global rice crisis

Rice feeds more than half the world—but also fuels diabetes and climate change

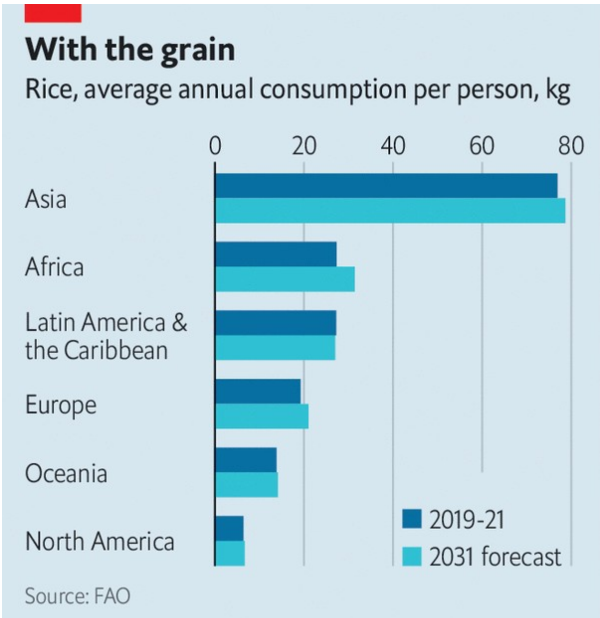
Mar 28th 2023 | Bassi Akbarpur, Delhi and Singapore



ACCORDING TO INDONESIAN legend, rice was bestowed upon the island of Java by the goddess Dewi Sri. Pitying its inhabitants the blandness of their existing staple, cassava, she taught them how to nurture rice seedlings in lush green paddy fields. In India, the Hindu goddess Annapurna is said to have played a similar role; in Japan, Inari. Across Asia, rice has been conferred with a divine, and usually feminine, origin story.

Such mythologising is understandable. For thousands of years the starchy seeds of the grass plant *Oryza sativa* (often called Asian rice) have been the continent's main foodstuff. Asia accounts for 90% of the world's rice production and almost as much of its consumption. Asians get more than a quarter of their daily calories from rice. The UN estimates that the average Asian consumes 77kg of rice a year—more than the average African, European and American combined (see chart). Hundreds of millions of

Asian farmers depend on growing the crop, many with only tiny patches of land. Yet the world's rice bowl is cracking.



The Economist

Global rice demand—in Africa as well as Asia—is soaring. Yet yields are stagnating. The land, water and labour that rice production requires are becoming scarcer. Climate change is a graver threat. Rising temperatures are withering crops; more frequent floods are destroying them. No mere victim of global warming, rice cultivation is also a major cause of it, because paddy fields emit a lot of methane, a potent greenhouse gas. The crop that fuelled the rise of 60% of the world's population is becoming a source of insecurity and threat.

Rising demand exacerbates the problem. By 2050 there will be 5.3bn people in Asia, up from 4.7bn today, and 2.5bn in Africa, up from 1.4bn. That growth is projected to drive a 30% rise in rice demand, according to a study published in the journal *Nature Food.* And only in the richest Asian countries, such as Japan and South Korea, are bread and pasta eating into rice's monopoly as the continental staple.

Yet Asia's rice productivity growth is falling. Yields increased by an annual average of only 0.9% over the past decade, down from around 1.3% in the decade before that, according to data from the UN. The drop was sharpest in

South-East Asia, where the rate of increase fell from 1.4% to 0.4%. Indonesia and the Philippines already import a lot of rice. If yields do not increase, these countries will be increasingly dependent on others to feed their 400m people, according to the *Nature Food* study.

For years production kept pace with rising demand thanks to the enduring effects of the green revolution, which began in the 1960s. To tackle poor yields, scientists at the International Rice Research Institute (IRRI), based in the Philippines, developed IR8, a variety that flourished with the use of fertiliser and irrigation systems. Introduced when China was emerging from famine and India on the brink of one, IR8 proved a mass life-saver.

As IR8 spread across Asia, from the Philippines to Pakistan, rice yields increased. Greater productivity made rice a more attractive crop, so more resources were dedicated to it. Reduced worries about food security freed Asian governments to focus on industrialisation and economic growth.

IRRI has developed new varieties of rice that could repeat some of this success. They are more productive and climate-resilient, and require less water. Still, meeting growing demand looks harder than it did in the 1960s. Urbanisation and relentless sub-division are eating into land holdings. Between 1971 and 2016 the size of the average Indian farm fell by more than half, from 2.3 hectares to 1.1.

This makes productivity gains harder, especially where labour is scarce. Planting seeds in neat rows, replanting seedlings and harvesting them is back-breaking drudgery that Asian workers increasingly have the means to escape. Water, another big input, is scarcer. In many places soils are depleted and poisoned by excessive use of fertiliser and pesticide.

And no crop is as vulnerable to global warming as rice, say scientists at IRRI. A study in 2004 found that a 1°C increase in minimum temperatures leads to a 10% decline in yields. Rising sea levels, another result of warming, are already causing salt intrusion in low-lying areas of the Mekong delta, eroding rice yields there. Massive floods last year in Pakistan, the world’s fourth-biggest rice exporter, are estimated to have destroyed 15% of its harvest.

Rice's contribution to global warming represents an underappreciated feedback loop. Irrigating paddy fields starves the underlying soil of oxygen. This encourages methane-emitting bacteria to flourish. Consequently, rice production is responsible for 12% of total methane emissions—and 1.5% of total greenhouse-gas emissions, comparable to aviation. Vietnam's paddy fields produce more carbon equivalent than the country's transportation.

A carbon culprit

Rice's nutritional quality is another growing concern. The grain is high in glucose, which contributes to diabetes and obesity, and low in iron and zinc, two important micronutrients. In South Asia the prevalence of diabetes and malnutrition can be traced to over-reliance on rice.

Tackling so many problems is complicated. If the first green revolution was about productivity, says Jean Balié, director-general of IRRI, the next one should focus on "systems rather than solutions at the plant or plot level". This calls for better rice policies as well as better varieties.

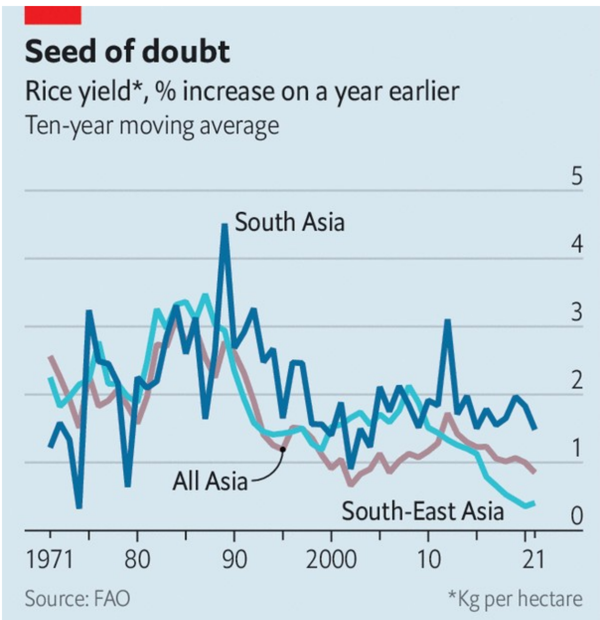
Poor or outdated government interventions underlie most of the productivity and environmental worries. They distort markets and blunt incentives for change. Consider the case of Sandeep Singh of Bassi Akbarpur, a small village in the northern Indian state of Haryana. Though he grows rice, he prefers to eat *roti*, a bread made of wheat, a crop far better suited to Haryana's hot, dry climate. Yet Mr Singh has been pushed by government incentives into a rice-wheat cropping cycle.

India procures rice from farmers at a guaranteed price, often set above the market rate. The crop is then sold to the poor at a subsidised price, promoting rice consumption. Fertilisers and water are also subsidised. Such interventions are prevalent across Asia. Most were introduced at a time of persistent food insecurity, when diabetes and environmental costs were much less of a concern than they are today.

Untying policy knots that have tightened over decades is hard. Farmers are vote banks that governments dare not antagonise. India's ruling Bharatiya Janata Party, which prides itself on implementing tough but necessary

measures, learnt this in 2021 when it was forced to roll back agriculture reforms in the face of protests by farmers.

Though there is no single solution for the deepening rice crisis, there are many partial ones. In parts of Asia where yields are low, such as Myanmar and the Philippines, it is possible to raise productivity by using more fertiliser and pesticide without doing serious environmental damage.



The Economist

Scientists at IRRI and other research outfits have developed rice varieties resistant to floods, drought and heat. They have also produced more nutritious strains. These changes, combined with innovations in cultivation such as direct seeding—a planting method that requires less water and labour—can reduce environmental damage and increase yields.

Experiments across Asia have confirmed this. In Bangladesh farmers growing Sub1, a flood-tolerant rice variety, achieved 6% higher yields and 55% greater profits, according to a study published in the journal *Food Policy* in 2021. A review of field trials in *Global Food Security* suggests drought-resistant varieties enjoy a yield advantage of 0.8-1.2 tonnes per hectare.

The challenge is to get improved seeds and methods adopted at scale. Many farmers do not know they exist. Some are averse to trying something new. A

nationwide survey of rice farmers in India in 2017-18 found that only 26% had adopted varieties released since 2004.

Governments can play a big role in highlighting the benefits of new varieties and methods. Vietnam's is leading the way. It recently announced an ambitious plan to cultivate "low-carbon" rice on 1m hectares. It promotes this as a means to save labour and improve efficiencies. It is essential to avoid advertising emissions-mitigation as a burden to farmers, says Bjoern Ole Sander, a climate scientist at IRRI.

A greener revolution

A bottom-up approach is also important. Agriculture-extension workers can play a big role in transmitting know-how, but are often neglected by policymakers. Most public agriculture spending goes on subsidies and irrigation, which tend to benefit richer farmers with bigger landholdings.

Governments also need to do a lot more to reduce people's dependency on rice. At India's request, the UN has declared 2023 the year of millet. India is hoping to sell farmers and consumers on this crop, which is far more nutritious than rice or wheat and requires a lot less water. Indonesia is also promoting it. Today only health-conscious hipsters in Delhi would choose a millet *biryani* over a rice one. But where elites lead, masses often follow. If a big market emerged, it would entice some farmers to switch and even ardent rice growers to diversify.

The first green revolution averted an Asian catastrophe. The situation may not be as precarious today, but the challenge is in some ways bigger. Countries need to produce more with less—and with much greater care for the environment. That would amount to a "truly green revolution", says Mr Balié, IRRI's boss.

The rewards could also be unprecedentedly large. More sustainable cultivation and increased yields would give farmers higher and steadier incomes. It would help them adapt to climate change and contribute to it less. This success, by no means assured, would help guarantee food security for Asians—and for the world. ■

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Rahul Gandhi

The world's biggest democracy is becoming less free

Narendra Modi's party seems keen to eliminate any significant dissent

Mar 27th 2023 | DELHI



THE WORLD'S biggest democracy has taken a serious hit. On March 24th Rahul Gandhi, leader of India's Congress party and by far the country's best-known opposition figure, was disqualified from parliament after a court sentenced him to two years in prison on what Mr Gandhi says is a spurious defamation charge. A son, grandson and great-grandson of prime ministers, he has vowed to appeal against his conviction, which was handed down by a district court in Gujarat, home state of Narendra Modi, India's prime minister. Yet even if Mr Gandhi avoids prison, he may not clear his name in time to lead his party into the general election due next year.

The court ruling followed weeks of tussling between Mr Gandhi and members of Mr Modi's Bharatiya Janata Party (BJP). Mr Gandhi had repeatedly called for an inquiry into the relationship between Mr Modi and Gautam Adani, a billionaire tycoon whose business practices and closeness to power have come under scrutiny. In a series of speeches in Britain he also

criticised the state of Indian democracy, prompting the BJP to block parliamentary business while demanding that Mr Gandhi apologise for supposedly insulting India abroad.

The Congress leader had been sued for defamation in Gujarat over a sardonic remark he made on the stump in 2019. He had noted that a pair of well-known fugitives from Indian justice were called Modi, a common family name in western India. Any observer of India's roughhouse politics would recognise such rhetoric as par for the course; the BJP's standard moniker for Mr Gandhi is *pappu* ("dimwit"). Yet Purnesh Modi, a minor BJP politician unrelated to the prime minister, claimed that he and his community had been deeply wounded by Mr Gandhi's remark.

The court found in Purnesh Modi's favour on March 23rd. The sentence it meted out to Mr Gandhi was unusually harsh, legal experts said. It was also precisely the minimum jail time that triggers automatic expulsion from India's parliament. Mr Gandhi was chucked out the following day.

India's opposition leaders have increasingly found themselves facing legal difficulties. Two leaders of the Aam Aadmi Party, another important opposition outfit, are in hot water with the government's Enforcement Directorate, which investigates economic crimes. Yet Mr Gandhi's troubles appear to represent a major escalation in the BJP's hounding of its opponents. Even if his appeal is successful, it will take time. The episode will therefore make Mr Gandhi even less effective at the helm of Congress than he has been hitherto (which is saying something). His treatment may also be regarded by other opposition leaders as a warning not to be too forthright in criticising Mr Modi and the BJP.

This might seem gratuitous, given the modesty of the threat posed to Mr Modi by Mr Gandhi. Congress has been trounced by the BJP in two successive general elections, and shows little sign of a resurgence ahead of next year's vote. Nor has the government struggled to fend off Mr Gandhi's demands for an inquiry into Mr Modi's involvement in the Adani saga. Even so, suggests Milan Vaishnav of the Carnegie Endowment for International Peace, a think-tank in Washington, Mr Gandhi's needling was too much for senior BJP members to stomach: "One reason for their success is that for them, no threat is too small to obsess over."

It is at least possible that Mr Gandhi’s harsh treatment will backfire. His disqualification from parliament was condemned by other national opposition leaders, in a rare show of solidarity. Yet the Gandhi princeling makes an unlikely victim. His party activists have so far failed to rally street protests on his behalf. And the leaders of the biggest regional parties, Mr Modi’s most serious challengers, show little inclination to work with him.

More likely, the long-winded legal process that lies ahead of Mr Gandhi will benefit the BJP government. His case will continue to dominate the headlines, making it hard for Congress or any other opposition party to sustain a serious attack on its record. The only indisputable victim of this sorry farce will be India’s increasingly Modi-stressed democracy.■

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So long, farewell

Middle-class Sri Lankans are fleeing their country

In despair for their future, skilled workers are leaving in droves

Mar 30th 2023 | COLOMBO



AT THE HEIGHT of the economic crisis in Sri Lanka last year, winding queues for fuel and cooking gas were matched only by lines at the immigration and emigration department. The nearly 875,000 passports it issued in 2022 was an all-time high. Most of those outside the nondescript building in Colombo were not looking for a post-pandemic getaway but workers aching to flee shortages, inflation and uncertainty.

Official records suggest that 300,000 of Sri Lanka's 22m people left for jobs abroad in 2022, most of them low- and semi-skilled workers. From January to March this year, another 73,000 left. And there is evidence that middle-class professionals have now joined the exodus.

Business leaders in many industries say they are bleeding staff, including managers they need to train replacements. Companies are used to churn among those aged 20 to 35—especially in IT and other in-demand professions—but now seasoned employees in their 40s and 50s are taking off.

Sri Lanka's prolonged crisis gives them many reasons to go. Annual inflation was 50.6% in February. Wages are not remotely keeping up, even as taxes climb. In January, President Ranil Wickremesinghe imposed more hikes to fix what the IMF—which last week approved a long-awaited $2.9bn package for Sri Lanka—called "one of the lowest revenue levels in the world". At 36%, the highest income-tax rate is still modest. The opposition National People's Power party may nonetheless be right to predict the tax rises will cause "the biggest brain drain" in Sri Lankan history.

Foreign recruitment agents are hiring young professionals on social media, says Rajitha Seneviratne, a 37-year-old air-traffic controller mulling an offer from the Middle East. Last month, his union warned that if "four or five more" of its members left, air-traffic control could break down.

Thousands of young IT workers have also decamped, potentially cramping one of Sri Lanka's fastest-growing industries. Hundreds of doctors have gone, including 477 from January to August last year. A continuing outflow could cripple rural hospitals. There soon "won't be anyone left to serve up a glass of wine in a hotel", Mr Wickremesinghe is said to have quipped.

Yet the government is actively encouraging the drain, both to lighten the public-sector wage bill and in the hope of increasing remittances, Sri Lanka's biggest source of foreign currency. The fugitive doctors are availing themselves of a facility for public-sector workers that the government introduced last June: up to five years of unpaid leave provided they remit $100-500 a month if they find work abroad.

The foreign employment minister, Manusha Nanayakkara, is trialling various schemes to push Sri Lankan workers overseas. His office advertises job openings with foreign governments on social media. A WhatsApp group and YouTube channel called "Rata Yamu", or "Let's Go Abroad", publicises jobs Sri Lankans can secure through a state-run employment agency.

The government is also ramping up training in nursing, care-giving and other professions where Sri Lankans are in demand overseas, especially in Kuwait, Qatar and Saudi Arabia, where over 40% of registered émigrés went last year. New vocational training centres are being opened, some with private-sector support.

These policies seemed to be having their desired effect. Remittances, which slumped last year, have increased over the past four months. Yet there is an obvious danger that, by pushing out its brightest talent, Sri Lanka is depriving itself of the people it needs to rebuild at home.

Mr Nanayakkara admits that skill shortages are already emerging in manufacturing and hospitality. Some private firms have launched modest countermeasures. Several IT companies have introduced, in effect, loyalty bonuses for their employees. A big tea company, Dilmah Ceylon Tea, is covering the recent tax rise for its workers. Even so, says its CEO, Dilhan Fernando, the “uncertainty of not knowing what tomorrow might bring” remains a powerful reason for them to emigrate. ■

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Banyan

In much of Asia, race is just too hard to talk about

Malaysia's former prime minister, Mahathir Mohamad, shows how not to do so

Mar 30th 2023



IN HIS POMP as a cantankerous prime minister of Malaysia (1981-2003 and 2018-20), Mahathir Mohamad would speak for a continent. "Asian values are universal values. European values are European values," he declared in 1996. These days, as a cantankerous 97-year-old troublemaker, Dr Mahathir tends to speak for just one of his country's ethnic groups, the majority Malays, who, he tweeted on March 9th, "get nothing from multiracialism". This was part of a long thread attacking Malaysia's Chinese and Indian minorities for failing, in his view, to adapt to Malay culture.

Not for the first time, Dr Mahathir was breaking a taboo. In Malaysia and many other Asian countries, open discussion of race is considered divisive and dangerous; it is often illegal. Yet that does not erase the political issue that race represents in Asian societies, many of which became multiracial as a result of colonialism in the 19th and 20th centuries, and witness enduring racial tensions. Asia needs to talk about race—even if Dr Mahathir

demonstrated precisely how not to do so. Security was stepped up ahead of a "Malay Proclamation" convention in Kuala Lumpur on March 19th at which he was due to speak. The event moved online after the hosts of two proposed venues withdrew their offers.

The sensitivity was understandable. Race riots in the 1960s cast a shadow over the politics of both Malaysia and Singapore (which left the Malaysian federation and became independent in 1965). In Malaysia, to counter an imbalance in which much of the national wealth was in ethnic-Chinese hands, Malays have enjoyed the sort of affirmative-action policies and privileges more often afforded a disadvantaged minority. Singapore, which has an ethnic-Chinese majority, restricts inflammatory speech to prevent race rows, and practises social engineering, such as ethnic quotas in public housing, to enforce integration.

Malaysia and Singapore, it should also be stressed, look comparatively harmonious in a region scarred by racially motivated horrors. In some Asian countries, minorities have been driven out: Chinese from Vietnam; Vietnamese from Cambodia; Nepalis from Bhutan; Indians from Fiji; Rohingyas from Myanmar; and on and on. The Chinese minority in the Indonesian capital, Jakarta, suffered horrific violence in 1998; hundreds were killed. Sri Lanka endured a bitter 26-year civil war, fuelled by discrimination against Tamils and then that minority's fight for a homeland, which ended in 2009.

So race is almost everywhere a delicate topic. Yet Asia's lack of almost any open discussion of it makes the issue vulnerable to rabble-rousers, as Dr Mahathir has demonstrated. His argument is that Malaysia's Indians and Chinese, who retain their own languages and culture, should conform to Malay norms. He does not insist that they convert to Islam. But he reminds readers that he is of Indian heritage, yet accepted as a Malay; and that he meets the definition in Malaysia's constitution of a Malay as someone who speaks Malay, follows Malay customary laws and is Muslim. He suggests that only Malays can be full citizens, and that the loyalties of the Chinese and Indian minorities are somehow suspect.

Similar racial finger-pointing and suspicion is sometimes fostered by the attitudes of the two continental giants to their diasporas. India grants

"overseas citizen of India" status and easy access to the country (but not full citizenship) to those with parents, grandparents or great-grandparents born there (and to their spouses). Since 1954, overseas Chinese have not been automatically eligible for citizenship. But public opinion and official statements both sometimes suggest China's government feels it has special responsibility for ethnic Chinese abroad. In 2015, after an ugly anti-Chinese demonstration in Kuala Lumpur, China's ambassador visited the affected area to warn that China would "not sit by idly" if things got worse.

Such misconceived interventions fuel the suspicions of those like Dr Mahathir who refuse to accept that Malaysia is a multicultural, multiracial society, and all the better for it. Like the Hindutva ideology embraced by Narendra Modi's government in India, this serves a political end, to win support among the majority by representing minorities as a threat. It is far more dangerous than the frank conversation about race most Asian governments fear. It also flouts the Asian values that Dr Mahathir espoused so fiercely in the 20th century. They include prizing consensus-building over confrontation and harmony over hatred.■

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China

- [Can America and China avoid another diplomatic crisis?]
- [Many wealthy people are considering leaving China]
- [Chinese nationalists are annoyed about colonial-era place names]
- [Joe Biden attempts to defang the Chinese tiger]

The Sino-American cold war

Can America and China avoid another diplomatic crisis?

Taiwan's president, Tsai Ing-wen, starts a sensitive visit to America

Mar 29th 2023 | TAIPEI


Getty Images

TRAVELS ABROAD by Taiwan's political leaders are always a diplomatic minefield. But especially prudent steps are required in the coming days, as the current president and a predecessor make unofficial visits to the two superpowers that may determine the island's future.

Taiwan's sitting president, Tsai Ing-wen (pictured), is passing through the United States en route to and from Central America. She is expected to meet the speaker of America's House of Representatives, Kevin McCarthy, in Los Angeles on April 5th. It would be the first time a Taiwanese president has met a speaker on American soil.

Meanwhile a former Taiwanese president, Ma Ying-jeou, of the opposition Nationalist Party or KMT, is on a 12-day trip through China. He is travelling as a private citizen, paying homage to his ancestors and visiting historical sites with Taiwanese university students. Mr Ma is the first former president

of the Republic of China, Taiwan's official name, to visit the mainland since the Communist victory over the Nationalists in 1949.

Both trips are delicate manoeuvres at a politically fraught time. Taiwan, a self-governing island of 24m people, is claimed by China. On March 26th Honduras established diplomatic relations with mainland China, leaving Taiwan with only 13 official allies. But it has the support of America, which is helping to bolster the island's defences. As Sino-American relations deteriorate, Taiwan risks becoming a flashpoint—much as it was last year when China responded to a visit by Nancy Pelosi, the then-speaker of the House, with military drills around the island.

Complicating matters is Taiwan's presidential election in January. Ms Tsai cannot run again, but she and the ruling Democratic Progressive Party (DPP) are keen to assert Taiwan's sovereignty—in part to impress voters at home—while trying not to provoke China. Mr Ma and the KMT take a different tack. They want to show voters they can engage with China without kowtowing to the Communist Party. Both are walking a fine line.

The fact that Ms Tsai's meeting with Mr McCarthy is planned to occur in America rather than Taiwan already shows pragmatic thinking to avoid a crisis. But much will depend on what exactly Ms Tsai says and does. She told reporters on March 29th that the trip will strengthen Taiwan's relations with "global democratic partners" in the face of expanding authoritarianism.

The American leg starts in New York, where Ms Tsai landed on March 29th, and was due to make a speech and receive an award the following day at a private dinner, hosted by the Hudson Institute, a conservative think-tank. That should not set any new precedents: she spoke at Columbia University on her last visit in 2019. She then visits Guatemala and Belize, two remaining allies, before flying to Los Angeles for the most sensitive part of her trip, an expected meeting with Mr McCarthy (and probably other members of Congress) at the Reagan Presidential Library.

American officials are certain to circumscribe her activities, as they have often done for previous Taiwanese leaders. When they broke precedent in 1994 by allowing Lee Teng-hui, then Taiwan's president, to refuel in Hawaii, a planned airport reception was so frugal he refused to leave his

plane. The Clinton administration let Mr Lee visit Cornell University, his alma mater, in 1995, but nixed a news conference and a visit to New York City. The government in Beijing was outraged nonetheless. It staged military drills and fired missiles near Taiwan, prompting America to send two aircraft-carriers to the area.

Diplomatic sigh

Since then Taiwan's leaders have made regular "transits" of America without such a dramatic response. Ms Tsai has made six visits, and American officials have told Chinese counterparts this one will be similar to those. Even so, given recent tensions, China could easily take umbrage. Aside from the McCarthy meeting, another sensitive issue is whether Ms Tsai meets senior Democrats or government officials. China will also scrutinise what she says in any speeches, and to what extent they are public. It has already lodged a formal protest. On March 29th a spokesperson for China's Taiwan Affairs Office threatened "resolute counter-measures" if Ms Tsai met Mr McCarthy, warning America not to arrange contact between her and government officials or do anything else to encourage Taiwan's independence.

Even if the trip is low-key, China may escalate the now-regular forays by its military ships and aircraft across the Taiwan Strait's midpoint. It could stage a larger show of force if it considers Ms Tsai's words or activities especially provocative, says Bonnie Glaser of the German Marshall Fund, a think-tank. Yet China is also wary of responding in a way that helps the DPP in Taiwan's elections.

Opinion polls suggest that threats from the mainland tend to strengthen Taiwanese identity and resistance to China. Surveys by different organisations show a majority supported Ms Pelosi's visit and welcome a potential visit by Mr McCarthy, in spite of China's military aggression. At the same time recent polling shows majority support for reducing cross-strait tensions and resuming exchanges. That is what the KMT is promoting.

Mr Ma's trip is calibrated to avoid accusations of collusion. He is there as head of his own foundation, with an itinerary focused on cultural activities. Hsiao Hsu-tsen, the director of the foundation, has said that Mr Ma will not

go to Beijing, but if mainland officials ask to meet, “the guests will follow the host’s wishes”. Yet the trip has a clear political message: the KMT can engage with mainland authorities in a way the DPP cannot.

The former Taiwanese leader, now 72, oversaw a period of rapprochement with China when he was president from 2008 to 2016. He signed more than 20 cross-strait agreements, allowing trade and tourism to flourish. In 2015 he met China’s president, Xi Jinping, in Singapore and spoke about the expansion of cross-strait ties built on a consensus of “one China” (including Taiwan), though the two sides interpreted the phrase differently.

Mr Ma and the KMT are trying to return to the past. “We all belong to the Chinese race,” said the former president in Nanjing on March 28th. Both sides of the strait should work together to “seek peace, avoid war and revitalise *zhonghua*”, he said, using a term that denotes ethnic Chinese people rather than China as a state. The emphasis on ethnic unity does not appeal to many Taiwanese voters, who have come to identify less with China as Taiwan has developed its own distinct cultural identity and as the mainland has become more authoritarian under Mr Xi.

Ms Tsai’s stance since she was elected in 2016 has been to insist that mainland authorities must respect Taiwan’s separate, democratic system rather than treat it as a subordinate part of a Chinese nation. That view is popular with voters but unacceptable to China, which cut communications with Ms Tsai’s government as punishment.

No matter who gets elected next year, Mr Xi will press for unification, says Chao Chun-shan, a Taiwanese policy adviser who helped plan the meeting between Mr Ma and Mr Xi in 2015 and visited China with a KMT delegation in February. Mr Chao frames voters’ choice as one of “peace or war”. The KMT can defuse tensions by promising the Communist Party that it rejects Taiwanese independence, he says—though it cannot guarantee that China will stop its military, economic or diplomatic coercion in return.

The DPP has criticised Mr Ma’s trip as “embracing appeasement” and acting as a “pawn” for the Communist Party’s goal of unification. But it, too, worries about conflict. If China manages to refrain from overreacting to Ms Tsai’s visit, both Taiwanese parties will probably claim a victory for their

pragmatism. If China responds with force, it will reduce Taiwanese hopes that goodwill can prevent war, no matter which party is in charge. ■

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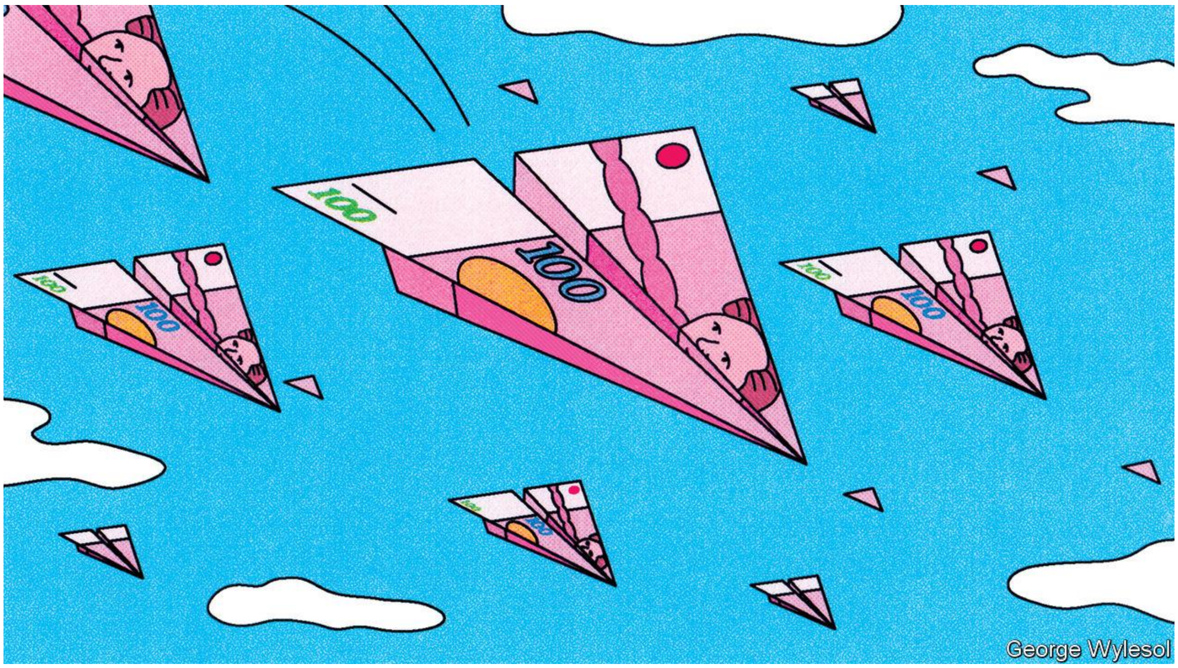
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Getting out

Many wealthy people are considering leaving China

The stable city-state of Singapore is a favourite destination

Mar 30th 2023 | BEIJING



JACK MA, FOUNDER of Alibaba, an e-commerce giant, is a symbol of how the ruling Communist Party has humbled the rich. In 2020 he dared publicly to criticise financial regulators. Soon afterwards they spiked the $37bn initial public offering of Ant Group, Alibaba's fintech affiliate, and investigated Alibaba itself for monopolistic behaviour. A chastened Mr Ma largely vanished from public life. In late 2021 he left China and spent time learning about farming and sustainable food production.

But after over a year's absence, Jack is back. On March 27th photos emerged of him visiting a school in his home town of Hangzhou. He was reportedly persuaded to return by China's new prime minister, Li Qiang. Mr Li is trying to reassure wealthy private entrepreneurs that, though they should know their place, they are still valued by the party.

Rich Chinese are in need of reassurance. China's draconian controls to stop the spread of covid-19 ended only a few months ago, after three years of disruptions to businesses and a brutal lockdown in Shanghai, where many wealthy Chinese live. Regulatory crackdowns have devastated once-thriving sectors like private education. Officials rage against "money worship" and make tax-dodging celebrities grovel for forgiveness. A government plan to narrow wealth gaps, though now on the back-burner, has some worried they will face more pressure to donate money. On top of that, China's wealthy worry that they may get caught up in sanctions if friction between China and America increases.

Capital fright

Faced with such headaches, many have been looking to leave. That was hard in 2020-21, when covid controls hit emigration. But in 2022 some 10,800 high-net-worth individuals, who have an average wealth of $6m, left the country, with the flow accelerating at the end of the year as covid controls eased. That is according to data compiled by Henley & Associates and New World Wealth, firms which track the movement of the rich. Even more are expected to leave in 2023, says Andrew Amoils of New World Wealth.

Getting on a plane is easy, moving wealth less so. In theory Chinese citizens are allowed to move only $50,000 out of the country each year. But there are many ways to avoid controls, from visiting shady Hong Kong money exchanges to setting up overseas companies to employ family members. Ten years ago American border officials were picking up Chinese nationals carrying cash in suitcases through airports. More recently, billions of dollars have left the country via cryptocurrencies.

Traditionally, Chinese citizens looked to buy property and other assets in Canada, America or Britain. In recent years, Singapore has been favoured. The city-state is the top destination for Chinese billionaires considering emigration, according to Hurun, a firm which tracks their wealth. Singapore has low taxes, good schools, a booming wealth-management industry and strong cultural links to China. Many there speak Mandarin. Its political stability is also a bonus for those wary of the rollercoasters of American and British politics.

The new arrivals have pushed up house prices and increased demand for luxury cars and high-end *baijiu*, a Chinese spirit. But the clearest sign of wealth shifting to Singapore is a growing number of Chinese family offices—private companies which manage a family's assets. According to data from Singapore's central bank, the number of such offices rose from 33 in 2019 to 347 in April 2022. By the end of 2022 it is likely that as many as 750 Chinese family offices were registered in Singapore, making up about half of the total number, reckons Kia Meng Loh, a senior partner at Dentons Rodyk, a law firm. He expects more will be registered this year.

All this suggests that, even though Mr Ma is back in China, the prime minister's efforts to charm the wealthy have a long way to go. He is also hindered by clumsy messaging. One provincial government said recently that businesspeople suspected of crimes "should not be arrested unless they have to be". Similar statements have been made for years.

Another billionaire's disappearance is not helping either. On February 16th a Chinese investment bank reported that its founder, Bao Fan, could no longer be contacted. Ten days later, the company said he was co-operating with authorities on an investigation. Mr Bao, it turns out, also saw value in moving his assets outside China. In the months before he disappeared, he was said to be setting up a family office—in Singapore, naturally. ■

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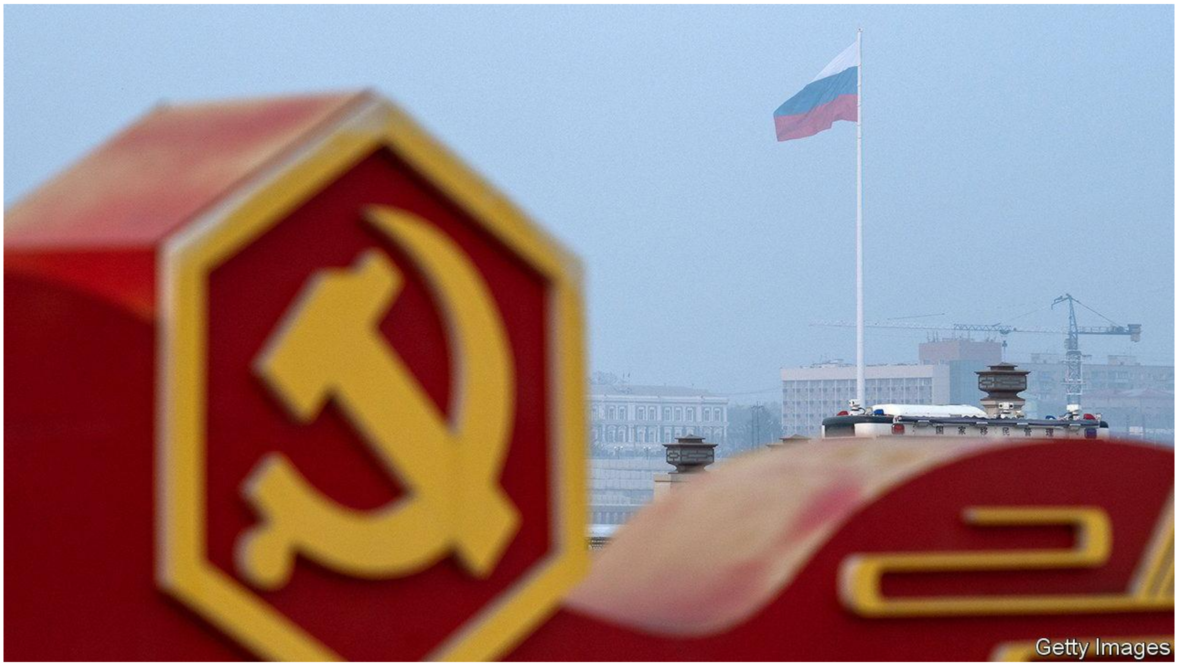
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Sea-cucumbers and fragrant harbours

Chinese nationalists are annoyed about colonial-era place names

Vladivostock, Tibet and Hong Kong are in their sights

Mar 30th 2023

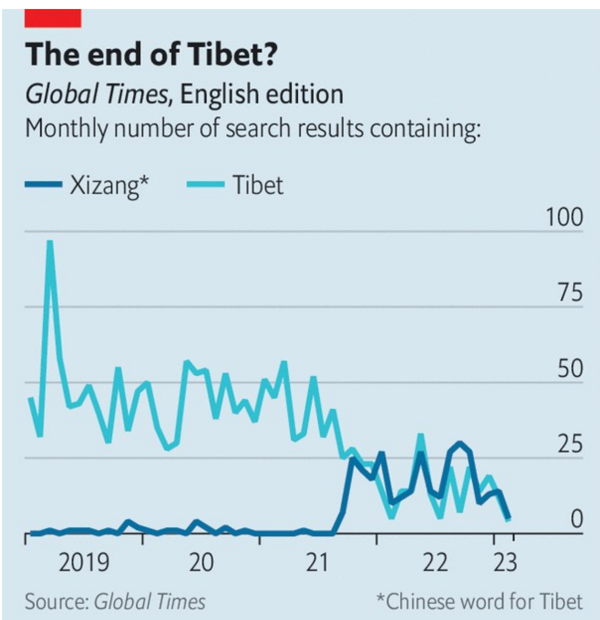


AT THE START of a three-day visit to Moscow on March 20th, China's president, Xi Jinping, was welcomed by his Russian counterpart, Vladimir Putin, with a feast featuring quail, venison and pavlova. At home, the thoughts of some Chinese nationalists were focused on another Russian city—one famous for its sea cucumbers, a popular Chinese delicacy. In China, the far-eastern Russian city of Vladivostok has been known traditionally as Haishenwai, meaning "sea-cucumber bay". More to the point, as these patriots point out, it was once ruled by China.

Amid the flourishing of Russia-China ties—said in a joint statement on March 22nd to have reached their "highest level in history"—a few Chinese have dared to recall how their country ceded vast swathes of territory, including Vladivostok, to the tsarist empire back in the 19th century. In the past month they have fumed on social media over the "unequal treaties" that wrested away this land.

Their interest was piqued by an order issued in February by the Chinese Ministry of Natural Resources. It repeated an edict of 2003 requiring that maps in Chinese featuring any of eight listed Russian places must show their historical Chinese names in brackets after their names in Russian. The places, most of them cities, are in former Chinese territory. One is Vladivostok, the biggest Russian port in that region.

Some of the commenters have been outspoken. On March 22nd one of them, with 54,000 followers on Baijiahao, a blogging platform, wrote that the ministry's order showed it had not been ruled out that "the homeland ceded by unequal treaties will be taken back in the future". An academic in Beijing with some 5,000 Baijiahao followers suggested Russia was right to be anxious about China taking back the territory—at least if China's giant neighbour "falls into chaos". Another, with 10,000 followers, urged: "Never forget our national shame." Using the Chinese names for Russian places would "encourage our country to recover these territories as soon as possible", the blogger wrote.



The Economist

Censors have been trying to calm things down. Earlier in March, Zhou Libo, a talk-show star, found his social-media accounts blocked after he suggested in a post to his millions of followers that China should aim to recover land ceded to Russia. Mainstream media—even *Global Times*, a nationalist

tabloid in Beijing that loves to chide foreign powers for their 19th-century colonialism—have avoided the topic.

Global Times has been paying more attention to another name: that of "Tibet". Since 2021 its English edition has often used the Chinese word for the region, Xizang (see chart). Some Chinese diplomats have adopted it, too. China Media Project, a research group in Hong Kong, says this may have begun in 2021, when a statement about a meeting of then foreign minister, Wang Yi, and his Russian counterpart, Sergey Lavrov, noted that "Russia firmly supports China's positions on issues related to Xinjiang, Hong Kong, Xizang and human rights." In that list, the anglicised Cantonese name Hong Kong ("fragrant harbour") is a colonial-era anomaly. Perhaps Hong Kongers should prepare for a rebranding as Xianggang, as the Mandarin pronunciation of the name is transliterated. ■

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Chaguan

Joe Biden attempts to defang the Chinese tiger

His policies stop short of full containment, but are intolerable to China anyway

Mar 30th 2023



TO BUDDHIST PILGRIMS, the Tiger Pagoda of Tanzhe Temple is a monument to a miracle. They believe that this stupa, in Beijing's pine-clad western hills, marks the tomb of a tiger so touched by a monk's piety that it abjured killing, moved into the temple grounds and lived on meatless gruel. When Chaguan saw the tomb on a recent hike, it struck him as a sadly useful metaphor. That vegetarian tiger could serve as a symbol for the strong-but-unthreatening China that America once sought as a partner, but which now seems to many in Washington like a naive dream.

For about 40 years before the election of Donald Trump, successive presidents insisted that America welcomed the rise of China—or at least of a China that is "peaceful and prosperous and that supports international institutions", to quote George W. Bush in 2006. A few years later, Barack Obama directly addressed the fears of many in China that America wanted to hold their homeland down. While hosting a visiting Chinese leader, Hu

Jintao, at the White House, he declared: “I absolutely believe that China’s peaceful rise is good for the world and it’s good for America.” In truth, the welcome was always conditional. In that same joint appearance, Mr Obama offered support for a China whose rise enhanced regional security, and which reinforced international norms and rules as a “responsible actor on the world stage”. He offered examples. China would be a welcome partner in efforts to stop rogue states acquiring weapons of mass destruction. A growing China could help poor countries in Africa and Asia join the global economy. Also, he told Mr Hu: “We want to sell you all kinds of stuff.”

Today, those assurances are like relics from another age. President Joe Biden shuns Trumpian bombast about China, but has kept many tariffs and trade curbs put in place by his predecessor. He has also banned the export of advanced technologies that might help the People’s Liberation Army (PLA) build world-beating weapons or artificial intelligence (AI) systems. America is preparing new controls on investment, both into and out of China.

Once, American presidents talked of shaping China’s rise. Boldly, they predicted that a growing middle class would surely start to demand individual freedoms, or at least a greater say in the running of their one-party state. In contrast, an Indo-Pacific Strategy released last year by the Biden administration adopts a bleakly defensive tone. The strategy talks of managing competition with the People’s Republic responsibly, while working with allies and friends to defend shared interests and values. It then continues: “Our objective is not to change the PRC but to shape the strategic environment in which it operates.”

Former hopes have been replaced by fears. China is called a threat to peace in Asia, as it seeks to intimidate the democratic island of Taiwan into submitting to rule from Beijing. China’s growing economic and diplomatic clout in Africa, Asia or Latin America is seen as empowering autocrats and undermining liberal democracy. Put in tigerish terms, a bipartisan consensus in Washington now sees China as a predatory power, whose menacing nature will not be altered by pious sermons.

To Communist Party leaders, America’s shift in strategy is an attack. Speaking to Chinese business representatives in March, the supreme leader, President Xi Jinping, accused Western countries led by America of

containing and suppressing China "on all fronts". For good measure, his newly elevated foreign minister, Qin Gang, denounced even American talk of competing responsibly as a trick. Throwing Mr Biden's words back at him, Mr Qin said that the American president's call to establish "guardrails" in the relationship and avoid conflict "actually means that China should not respond in words or action when slandered or attacked".

For its part, the Biden administration rejects the charge that it is bent on all-encompassing containment of China. In public, the president and senior officials call on China to play a constructive role over such global issues as climate change, food security, public health and flows of deadly narcotics. In private, it is taken as a given that China will be an economic giant and a potent regional military power. But continued military primacy in the Indo-Pacific, for America and its allies, is the goal of leaders in Washington. Explicitly, the logic of export controls and investment screening is to stop American technology and money powering the PLA to a position of unmatched strength.

Two tigers, one mountain

America used to extend a conditional welcome to China's overall rise. Now, that welcome is highly selective. Some forms of Chinese economic strength and influence are seen as potentially benign, if they support certain global public goods. Other forms of Chinese clout are openly deemed a threat to be blunted. That challenges China's stated preference for a world order built on great-power balancing. In the words of Zhou Bo, a retired PLA senior colonel now at Tsinghua University's Centre for International Security and Strategy, there will be stability only "once China and the United States have parity of military strength in the Asia-Pacific".

Professor Da Wei of Tsinghua University coins his own animal imagery to explain how leaders of his country feel. "It is natural for a country to want to become strong, like a tiger," he says. "But the US is not comfortable with China becoming a tiger. America wants China to be a cat, maybe a fat cat. And it wants to pull out our teeth, like AI or high-end semiconductors which can empower China's industrial development and military capability."

America's new vision of co-existence is not quite all-round containment, or across-the-board decoupling. But it does involve seeking to curb China's coercive power, whether rulers in Beijing like it or not. American distrust of Mr Xi's growling swagger is understandable. So is China's hostile response. As a result, a ferocious contest of strength in coming years seems inevitable. After all, no tiger chooses to be neutered.■

Read more from Chaguan, our columnist on China:
The revealing appeal of China's cheapest city (Mar 22nd)
Why Chairman Mao's victims are denied justice (Mar 16th)
What party control means in China (Mar 9th)

Also: How the Chaguan column got its name

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United States

- Both America’s political camps agree that TikTok is troubling
- Perils grow as America and Russia stop sharing data on nukes
- School-voucher schemes are spreading across America
- Chicago tries to export its most unpleasant drink
- Why winning a Wisconsin Supreme Court race matters so much
- How to write the perfect 2024 campaign book

China in your hand

Both America's political camps agree that TikTok is troubling

That does not mean it will be banned

Mar 30th 2023 | DALLAS



“ABUSING STATE power to suppress foreign companies”. That might sound like a description of China's economic strategy, but instead it is the charge that China's Ministry of Foreign Affairs has levelled against America's government, without apparent irony. March 28th marked the deadline for TikTok, a wildly popular Chinese social-media app, to be wiped from federal-government devices because of worries about security. Attacks on TikTok, which claims 150m American users, will not stop there. Politicians in Washington are considering two options that China's government has long embraced for American companies: curbing TikTok's freedom to operate, or an outright ban.

With its attention-grabbing videos TikTok, like other social-media companies, gets blamed for addicting young people, delivering harmful content and spreading misinformation. According to a new survey by Common Sense, an advocacy group, 45% of American teenage girls say

they are addicted to TikTok, compared with a third who say the same about Instagram. American TikTok users spend a staggering 82 minutes a day on the app, more than on Facebook and Instagram combined.

Unlike Silicon Valley firms, however, TikTok has ties to the Chinese Communist Party (CCP) and China's government through its parent company, ByteDance. This makes users potentially vulnerable to data collection, propaganda and misinformation. "For all the critiques of the American-based platforms, at the end of the day, they don't report to the CIA, and they don't report to the American government," says Mark Warner, a senator from Virginia.

Donald Trump's administration sought to ban the app but the effort was blocked by a court. Since then TikTok has been trying to negotiate a compromise with the Committee on Foreign Investment in the United States, an inter-agency group focused on national-security risk, suggesting that it should maintain ownership of TikTok but store data in America, under the oversight of Oracle, an American tech firm.

But few believe that it can really safeguard user data from the Chinese government, given ByteDance's ties to the CCP and the fact that Oracle would not have true power to police operations. Hence the buzz about forcing ByteDance to divest TikTok, or banning it altogether.

America is not alone in being concerned. India was the first country to ban TikTok (and other Chinese apps) in 2020, after a border clash. Britain, Canada, the European Parliament and others have banned TikTok from officials' devices, and many countries are considering what to do next. A recent report to Australia's parliament outlines the "risks not only to the data privacy of individual users, but to social cohesion, democratic functioning and the national-security interests of democratic nations". National-security folk worry about China using TikTok to interfere in elections, much as Russia used Facebook in the 2016 presidential race in America.

Although concerns about TikTok began as theoretical, they are no longer so. In December ByteDance confirmed that employees in China and America improperly accessed TikTok data on journalists, including tracking where they were, in an effort to ferret out their sources. TikTok's content is more

pro-CCP than its competitors' and it also hosts more misinformation, according to the recent Australian report. And for all the talk of American protectionism, China does not make TikTok available at home. A sanitised version, Douyin, is what is on offer from ByteDance in the Chinese market, with strict limits on content and time limits for young users.

Reactions to TikTok—encapsulated in the hostile five hours that TikTok's boss, Shou Zi Chew, recently spent in front of a committee of congressional interrogators—reveal three important things about America. First, the TikTok question shows how American politicians are more united in opposition to China than at any time in recent history. During the Trump administration it was mainly the China hawks who squawked about the threat posed by China and the app. That has changed. TikTok is "one of the most unifying issues across the political spectrum", says Ro Khanna, a Democratic congressman from California. Politics mirrors public opinion. Today, only 16% of Americans have a favourable view of China, down from 44% in 2017, according to the Pew Research Centre, a think-tank based in Washington, DC.

A few fissures are still visible. Republicans are more likely to talk about an outright ban of TikTok, whereas Democrats favour "divestment", forcing a sale to an American firm. Several politicians, including the "squad" of left-wing progressives in Congress, portray the anti-TikTok rhetoric as xenophobic. But what's most striking is the broad alignment of opinion in an otherwise polarised Washington.

Second, the TikTok debate offers a lens into politicians' calculations. With greater reliance on younger voters, who in turn rely on TikTok to fill their days, Democrats have been more hesitant to contemplate a ban. "There's recognition among Democrats that you'd have mutiny in this country if you kick millions of young people off TikTok," says Mr Khanna. What would mutiny look like? "You'd have real anger at a governing class they think doesn't get how young people communicate," he predicts. Gina Raimondo, the commerce secretary, has mused that "the politician in me thinks you're gonna literally lose every voter under 35, for ever." In its extensive lobbying in Washington TikTok has focused on Democrats' vulnerability to young voters' anger, in an effort to avert a ban.

Finally, the debate over TikTok highlights how little tech lawmaking has occurred on the federal level and the extent to which it is originating from state legislatures. Before the federal government banned TikTok on government devices, many states had already done so. Despite years of congressional hearings castigating tech bosses, no meaningful national law on tech has passed since one in 2018 punishing online promotion of sex trafficking. Although there are calls for a national privacy law, which would enable consumers to access and delete their data, it is not a priority, says Brian Wieser of Madison and Wall, a consultancy.

In contrast, five states (including California and Connecticut) have passed comprehensive privacy legislation. Utah has just passed a first-of-its-kind law requiring parental permission for those aged under 18 to use social media and banning usage for under-18s after 10.30pm. A patchwork of state legislation will create a headache not just for TikTok but all internet firms.

What happens next? That may be determined as much by Chinese officials as American ones. Many politicians think a sale of TikTok to an American company rather than an outright ban is most politically palatable, but recent reports suggest that China would rather shut down TikTok than allow its sale. "If the Chinese say no to a divestment, that gives the administration political cover for a ban," says Matt Perault, director of the Centre on Technology Policy at UNC-Chapel Hill.

The clock is tiktocking

Several proposals about how to pursue a ban are being bandied about. A bipartisan bill sponsored by Mr Warner and John Thune, a Republican senator, called the RESTRICT Act, has White House support and has "most momentum" in Washington, says Matt Pottinger, who was deputy national security adviser under Mr Trump. The bill would give the Commerce Department authority to investigate and "mitigate" (ie, "ban") threats posed by foreign companies. It is designed to circumnavigate the "Berman Amendment", a law of 1998 that guarantees the free flow of information to hostile nations and has been a barrier to an outright ban.

A TikTok ban would not be straightforward. It would be challenged on First Amendment grounds, and several free-speech groups, including the

American Civil Liberties Union, have threatened to take action. One way round this could be to add TikTok to the Commerce Department's "Entity List", a sanctions list, which would prevent platforms from hosting the app (literal deplatforming) and would probably withstand a First Amendment challenge.

Action will either happen soon or take ages. As the 2024 election approaches, politicians will show less appetite to target one of young voters' favourite apps. Precedent in tech politics suggests that lawmakers' outrage could give way to inertia. "A lot of people are going to talk big, but nobody's going to have the courage" to ban TikTok, says Nazak Nikakhtar, a lawyer at Wiley who previously worked for the Commerce Department. The short-form video app is poised to remain a long-running drama.■

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Mistrust, don't verify

Perils grow as America and Russia stop sharing data on nukes

The war in Ukraine is destroying what remains of arms control

Mar 30th 2023 | WASHINGTON, DC



BIT BY BIT, the fabric of nuclear arms control is being rent. America has done much tearing, for example by abandoning the Anti-Ballistic Missile Treaty and the Intermediate-Range Nuclear Forces Treaty. But with its invasion of Ukraine, and its threats to use nukes, Russia has slashed away at what remains.

In recent weeks it has made two more gashes. On March 25th Vladimir Putin, Russia's president, announced that Russia would deploy tactical nuclear weapons (those with relatively short range and low yield) to Belarus, its satellite state. This would do little to change the nuclear balance—Russia scarcely needs Belarus to nuke Ukraine or NATO. Rather, the move is more a form of nuclear intimidation as Russian conventional forces falter on the ground. America says it has seen no worrying movement of tactical weapons.

More serious is Russia's near-total halt to information-sharing about long-range "strategic" nuclear weapons. On February 21st Mr Putin declared that Russia would "suspend" New START, a treaty signed in 2010 and extended in 2021. It limits America and Russia each to 1,550 warheads and 700 deployed "launch platforms" (defence-speak for intercontinental ballistic missiles, submarines and heavy bombers).

The practical meaning of Mr Putin's move soon became clear: no day-to-day notification of matters such as the movement of nukes; no twice-yearly data exchanges on the state of stockpiles and platforms; no on-the-ground inspections; and restrictions on information on missile launches. On March 28th the Biden administration confirmed to Congress that it, too, would stop the twice-yearly data exchange. "We obviously would like to see Russia back in full compliance. We believe that the New START treaty is good for both our countries. Heck, it's good for the world," said John Kirby, a White House spokesman. But given that Russia was not supplying information, "we have decided to likewise not share that data."

America's retaliation is calibrated: it will still publish six-monthly public summaries of its strategic arsenal. Moreover, it will continue to provide day-to-day notifications even if Russia does not. "It's a clever position, and also a very responsible position," says Rose Gottemoeller of Stanford University, who was America's chief negotiator for New START. "It conveys to not only Russia but the international community at large that the United States is being the responsible one here." Yet such asymmetry—whereby America offers reassurance while Mr Putin stirs nuclear insecurity—may not hold indefinitely.

Swapping of information is vital to nuclear stability, enabling each side to verify that the other is abiding by the treaty. Intelligence will fill some of the gaps created by the lack of exchanges. But over time, says Daryl Kimball of the Arms Control Association, a lobby group, each side's picture of the other's arsenal will blur, increasing doubt and the risk of misunderstanding. "It makes an already difficult relationship harder to manage," he says.

For now both sides say they will abide by New START's limits on weapons. Yet the breakdown in nuclear information-sharing raises the risk of a future arms race. The treaty is set to expire in less than three years' time, removing

the last restraint on nuclear arsenals. As enmity deepens, the prospect of a follow-on deal is vanishing. This comes just as a new era of three-sided nuclear deterrence approaches: America will soon confront not one but two big nuclear rivals as China builds up its nuclear stockpile from a few hundred warheads to perhaps 1,500 by 2035, according to the latest Pentagon estimates.

America is in the midst of modernising its nuclear "triad" of ground-, sea- and air-launched weapons. Some argue that it needs a much larger arsenal. Russia is thus handing American nuclear hawks "a gift", says James Acton of the Carnegie Endowment for International Peace, a think-tank. What is more, he argues, limits on weapons benefit Russia more than America because Russia is poorer and will one day want to rebuild its degraded conventional forces. "Russia has cut off its nose to spite its face," says Mr Acton. "The US ultimately beats Russia in an arms race." ■

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Hogwarts and all

School-voucher schemes are spreading across America

This is despite little evidence that they improve academic achievement

Mar 30th 2023 | TALLAHASSEE, FLORIDA



PEOPLE LINED the walls in the packed hearing room. The double doors at the back opened and closed constantly as traffic flowed in and out. Adults whispered, some small children whimpered. A heavyset man in a bright green T-shirt smelling strongly of damp laundry was seated shoulder-to-shoulder with your correspondent. When the Democratic legislators spoke, he leaned closer and mumbled disapprovingly. Agitation was palpable on both sides. Florida was about to pass its first statewide universal school-voucher bill, and the stakes were high.

On March 27th Florida's governor, Ron DeSantis, signed a bill that will allow families to take about $8,000 of state education funds, typically allocated to public schools, and use it for private school, religious school or even home schooling. Florida is not the first state to do this. A similar law was passed in Arizona last year, and in Arkansas, Iowa and Utah over the past few months. Indiana, Oklahoma and Texas all have similar bills in the

works. According to the Centre on Budget and Policy Priorities, half of all states are considering new laws to expand these policies.

About 10% of pupils attend private schools in America, a higher share than in Britain, which is often seen as an outlier. And their number may be about to soar. Fans of vouchers argue that they give less-affluent parents the same sort of choices as the parents of children at Andover and Choate. The concept of school vouchers originated with Milton Friedman in the 1950s, then picked up again in the 1990s and early 2000s. The first programme of that period was spurred by black families in Milwaukee seeking a black-run school district that they hoped would perform better than the racially integrated one. Vouchers were given instead. In the 2010s several statewide initiatives took root in Arizona, Florida and elsewhere.

Now a new wave is building, this time in response to the culture wars. In July 2021 Betsy DeVos, a former secretary of education under Donald Trump, wrote an opinion piece for Fox News which argued that these funding schemes could “liberate kids from race indoctrination”. The pandemic woke parents up to what was happening in state-school classrooms, says Skylar Zander of Americans for Prosperity, a conservative advocacy group.

There is one hitch, though. The evidence for the effectiveness of these programmes is weak. The number of studies, many pointing in different directions, can make the research seem mixed. But limit them to randomised control trials measuring academic achievement, published in top journals, and the story is clear. Voucher schemes did well in the 1990s and 2000s. The programme in Milwaukee had a positive effect on pupils’ maths scores when compared with the state-school children left behind. A separate programme in Washington, DC, during the 2000s also had a positive impact on reading.

Unfortunately, these schemes have fared poorly since then. A decade later, the DC programme produced worse maths scores. In Louisiana’s statewide scheme, pupils who received vouchers for private school had test scores in maths that were 0.4 standard deviations lower than their public-school peers. “We’ve never found something so catastrophically bad,” says Joshua Cowen, who researches education policy at Michigan State University. This

was almost double the size of learning loss from covid-19 and Hurricane Katrina.

Why have more recent schemes done so poorly? One reason could be that the earlier ones were more focused. Both Milwaukee's and DC's were restricted to lower-income families. Milwaukee's initiative was limited to only 1% of the entire public-school population from 1990 until 1994, and only 12 private schools took part by 1995. Even as programmes expanded to entire states, they were still focused on specific pupils. The first statewide voucher policy, implemented in 1999 in Florida under then-governor Jeb Bush, was limited to children in failing schools. (Two schools qualified and only 58 pupils took part in the first year.)

These newer programmes might be dealing with the "challenge of scaling", says Patrick Wolf of the School Choice Demonstration Project at the University of Arkansas. Florida's current law allows disabled pupils, children in foster care and families with a household income of $120,000 a year or less to qualify. Last year about 200,000 Floridians participated. The new law allows any family to get the state money, even those who have never used the public-school system. Arizona's kindred universal policy has already nearly quadrupled its voucher programme's size.

Public schools have also improved over the past 20 years, making it harder for private ones to best them. With the exception of covid-19 learning loss, national exam scores have steadily ticked upwards since the 1990s. Some private schools are excellent, of course. But those ones are typically oversubscribed. Many children whose parents take advantage of vouchers are left with what Dr Cowen calls "sub-prime private schools", some inside old strip malls and crumbling churches.

Perhaps because the evidence is so thin, the voucher laws in Florida and Arizona are light on measuring academic achievement. What is more, currently the benefits of these schemes go mainly to wealthy families. One study of three states found that most tax-credit scholarship recipients (a type of voucher) came from families earning over $200,000 a year. Even Mr DeSantis had reservations about a universal scheme: "If you have a family that's very high-income, they have school choice," he said on March 7th

after his state-of-the-state address. “They don’t necessarily need to be eligible for the [universal] programme.” He signed the bill anyway.■

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Care for a shot of Malört?

Chicago tries to export its most unpleasant drink

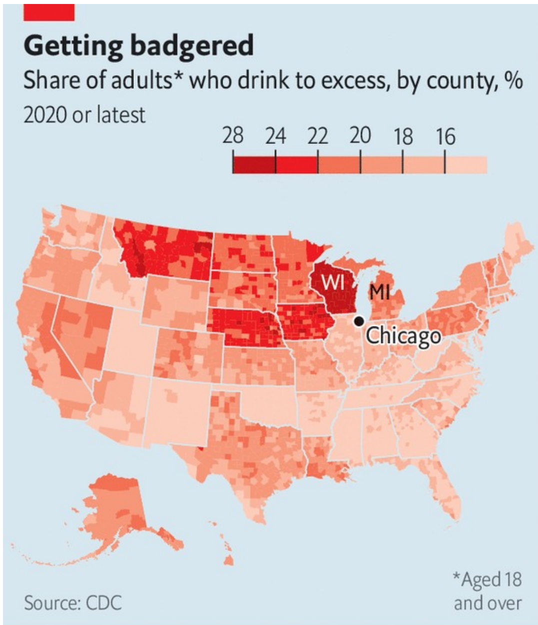
Why do parts of the Midwest love such awful booze?

Mar 30th 2023 | CHICAGO



NEW VISITORS to Chicago—at least those who stay with local friends or relatives—can expect many lovely experiences. They will be taken to the Art Institute, to pose like Ferris Bueller in front of priceless paintings, and to The Bean to take selfies with the skyline, then perhaps for an Italian beef sandwich. Almost as inevitable, at least if they are not teetotallers, is that afterwards they will be taken to a bar and forced to drink a "Chicago handshake": a pint of Old Style beer and a shot of a deeply bitter spirit that is almost entirely unknown outside the Windy City.

That is Jeppson's Malört, a wormwood liqueur invented by Carl Jeppson, a Swedish immigrant to the city almost a century ago. The spirit is so closely associated with Chicago that it includes a version of its flag on the bottle (an old one, with three stars instead of four). It tastes, connoisseurs say, a little like an old shoe. Yet its owners would like it to sell elsewhere.



The Economist

In late March Malört went on sale in Ohio, with a flurry of publicity mostly focused on how awful it is. Since 2018, when CH Distillery, a small Chicago-based maker of vodka, gins and other spirits, bought the brand, it has expanded sales to around 30 states, says Tremaine Atkinson, the firm's CEO. The market is already there, largely because "Chicagoans land in other places and they all seem to get nostalgic about Malört," he says. As a result, "it spreads like the noxious weed that wormwood is." Some fans have even written in from New Zealand, Mr Atkinson says, sending a recording of a song about the drink that leaves a similar aftertaste to its subject. He declined to share it with *The Economist*. It is less clear yet, however, whether the market expands much beyond Chicagoans who have moved away.

And what about the core market, Chicago proper? Some might expect the growing sophistication of American drinking culture to reduce the appeal of bizarre hooch. Visitors to even the smallest towns can now usually buy a fancy craft beer made nearby, so why drink something awful to feel like a local? Drinks like Malört seem to hold on as a symbol of regional pride. Indeed, some fancy bars have recently started offering Malört cocktails—a less traumatising way to try the city spirit. Mr Atkinson says the taste of wormwood goes especially well with citrus flavours.

Of course, Malört is not the only Midwestern alcoholic speciality outsiders are shocked by. In Wisconsin, locals drink a sickly sweet version of an Old Fashioned made with Korbel, a Californian brandy, and Sprite, topped with a glazed cherry. Over half of Korbel's sales are in the Badger State. In Michigan a popular cocktail, the "Hummer", features white rum, Kahlúa and two full scoops of vanilla ice cream. Midwesterners are more likely to indulge in binge-drinking than most other Americans (see map). Malört is advertised as being "savoured by two-fisted drinkers". That is because you need something else in your other hand to wash it down.■

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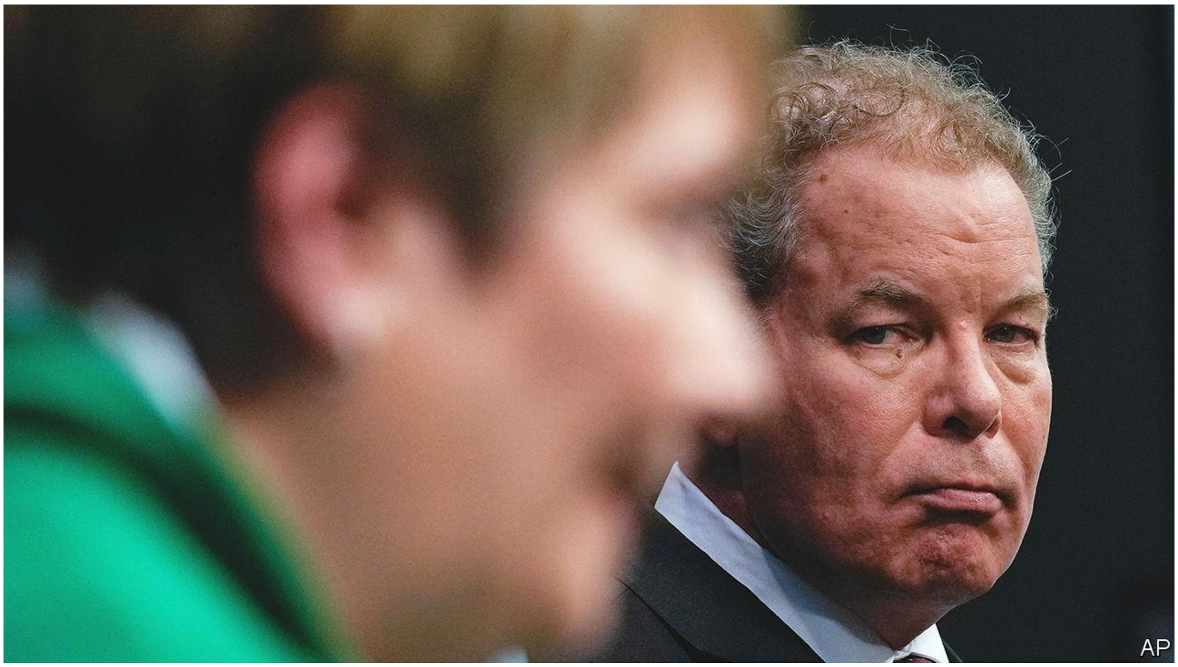
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Full-court press

Why winning a Wisconsin Supreme Court race matters so much

In a gridlocked, gerrymandered state, it is the Democrats' best hope for change

Mar 26th 2023 | MADISON



ELECTING JUDGES is fundamentally odd. The perfect example of this is the race to fill an open seat for the Wisconsin Supreme Court. The two candidates met for the only debate of the campaign on March 21st. Daniel Kelly, the relative conservative, insisted in his closing remarks that he was completely apolitical. "We must not talk about politics," he said. The moderator, a political journalist who had asked mostly political questions, thanked the debate's sponsor, a website called WisPolitics.com. Journalists then flocked to Mr Kelly's press adviser, a Republican Party activist and former candidate for lieutenant-governor, to try to get interviews.

The problem is that no one believes the judges will be apolitical. The race has become the most expensive judicial election in the country, with at least $30m spent by partisan operatives on television ads. This contest will

determine the ideological balance of the bench, which voters treat more as a supreme legislative council than a deliberative judicial body.

Mr Kelly, who was appointed to the court in 2016 by a Republican governor, is expected to rule to maintain the state's gerrymandered district lines. He is also expected to vote to keep the state's ban on abortion, which was passed in 1849, in effect. Janet Protasiewicz, his opponent, a liberal circuit-court judge from Milwaukee, is telegraphing her opinions rather unsubtly. She talks frequently about her fundamental belief that a woman has a right to choose. And she has called the current maps rigged. "I put my values right out there. You can figure out what Dan Kelly's values are by a simple Google search," says Ms Protasiewicz.

Democrats hope the election on April 4th will help break the stranglehold Republicans have had on state politics. "This election is the hinge moment in Wisconsin's political history," says Ben Wikler, the state party's chairman. Wisconsin, rather like the entire United States, is a profoundly and bitterly divided state, with an almost equal split between Republicans and Democrats. In statewide contests, Democrats have won slightly more elections in Wisconsin than they have lost in recent years. The governor, Tony Evers, is a Democrat, as is one of two United States senators, the secretary of state and the attorney-general. Yet favourable district lines mean that Republicans completely dominate the legislature. They hold 64 out of 100 seats in the state House and 21 out of 33 in the Senate, one short of a supermajority. That means that, at best, a Democratic governor can veto Republican laws, but has no chance of making his own.

These lines are consistently ranked as the most gerrymandered in the country. Mr Wikler hopes the maps will be revisited. Last year the Supreme Court, ruled by a conservative majority, sided with the Republican legislature rather than seeking a compromise. (Wisconsin law says that the legislature and the governor are meant to agree on the map.) It was also unusually strict about voting challenges, making it harder to cast absentee ballots. Mr Wikler warns that three members of the seven-member bench wanted to take Donald Trump's lawsuit seeking to overturn his election loss in 2020. A knife-edge election in 2024 could be mucked about with, Mr Wikler fears. "To live in Wisconsin is to disabuse oneself of the fantasy that the threat to democracy is gone," he says.

Republicans agree that democracy is at risk, but argue that the threat is from the other side. With Ms Protasiewicz on it, the court would adopt “a purely partisan gerrymandering map, as opposed to some sense of compromise,” says Scott Walker, the most recent Republican governor of the state. He claims that Democrats are hoping to use the court to usurp the Wisconsin legislature because they cannot win it. Young voters, in particular, he says, have been “indoctrinated” and “don’t appreciate that just because there’s a Democrat governor and Democrat president, that doesn’t mean that they get whatever they want”. He accuses Ms Protasiewicz of promising them political victories even if it means taking legally unsound decisions.

It is true that Ms Protasiewicz has campaigned on political lines that hardly focus on legal questions. In a series of advertisements, for example, she has highlighted her view that abortion should be legal. That is certainly animating the race. Before the televised debate, a protester dressed as a uterus appeared outside the venue to greet the watchers. But that is a curious thing for Republicans to complain about: they have long approached not just elections but judicial appointments on almost entirely partisan grounds.

Mr Wikler says Democrats have little choice but to lean in, as the alternative would be tantamount to “unilateral disarmament”. Candidates who are “arguing for a totally apolitical message about competence…can wind up losing,” he says. Craig Gilbert, of Marquette University, points out that the correlation between voting for judicial elections and ordinary partisan contests has gone up markedly over time.

Courting voters

A fairer map would not guarantee Democratic supremacy, because Democratic voters are so concentrated in Madison, the state capital, and Milwaukee, its biggest city. That divide has widened as rural voters have drifted towards the Republican Party, even as Madison has grown and the once-staunch Republican suburbs of Milwaukee have swung to the Democrats. Mr Wikler concedes that “if you relied on geography” there would still “be some tilt” towards the Republican Party.

As long as Wisconsin is divided almost exactly between Republicans and Democrats, the politicisation of the court is inevitable. Too much is at stake,

and law too ambiguous, for it to be any other way. Russ Feingold, a progressive former Wisconsin senator, says: "Our elections are, sadly, already becoming increasingly judicial affairs." The reliance on lawyers to determine huge social and political questions is evidence of a failure of the political system. As this goes on, it will weaken trust in the judiciary. That is not just true of Wisconsin. Last September disapproval of the United States Supreme Court hit its highest recorded level. Wherever you look, the judiciary seems less and less able to do its essential job—to manufacture democratic consensus on the thorniest questions.■

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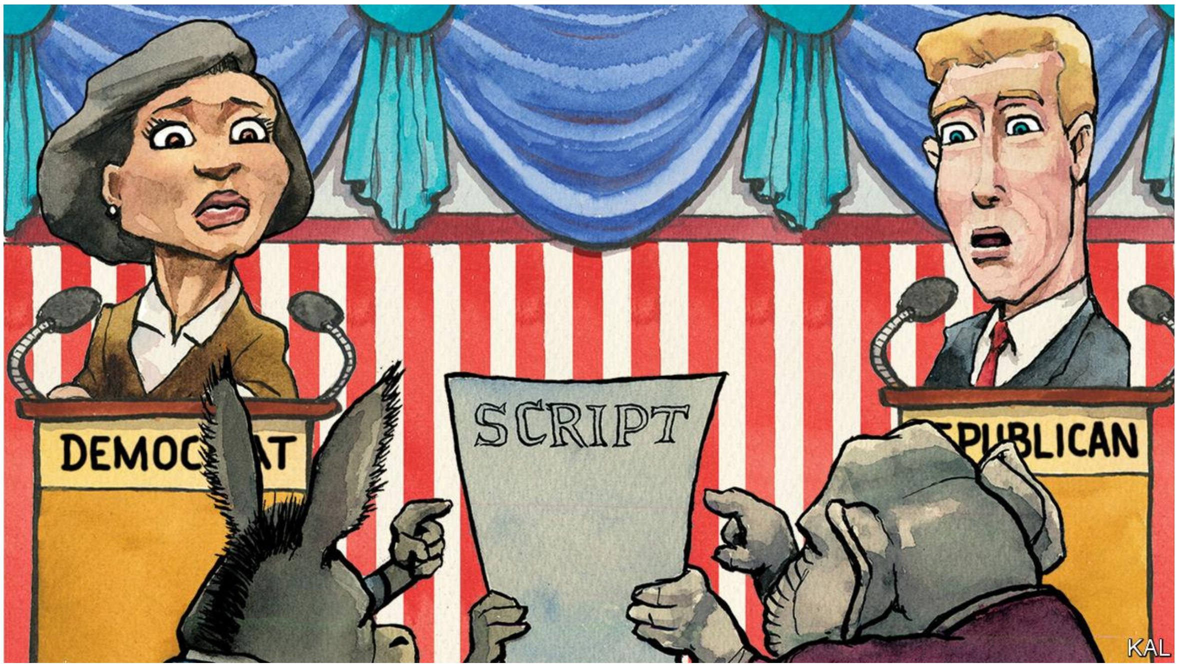
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Lexington

How to write the perfect 2024 campaign book

A ghostwriter's guide

Mar 28th 2023



DEAR CANDIDATE,

CONGRATULATIONS ON YOUR decision to run for office in 2024, and thank you for entrusting our highly experienced team at Ghostwriters in America's Service with the privilege of assisting you in writing your campaign book. We understand how scary it can be to confront the blank page, particularly without a richness of policy expertise or politically appealing life experience to draw upon (and, frankly, you are already running a bit behind for this cycle). We are here for you.

Unless you have chosen to purchase the Santos Package, a GAS writer will be in touch shortly to gather some basic factual information in order to set to work drafting the chapters on your childhood and early adulthood, which we've found can otherwise trap aspiring national leaders in unproductive bouts of introspection, if not despair (lamenting roads not taken, contacting past loves on Facebook, attempting to tamper with public records etc).

But it's important for you to take ownership of your autobiography at the outset, so that your authentic voice will be heard. For that reason we have created the attached template for your preface. We realise that, as Democrats and Republicans, you will face different challenges in your respective races. But you should be comforted to know that those challenges are no longer unique! Whether you are running for the House, Senate or presidency, the nationalisation and polarisation of politics have simplified so much of campaigning, including writing a campaign book. You don't need to come up with your own ideas any more. In fact, they can just get you into trouble. (An eccentric personality camouflages this, so it helps more than it used to, but it's not essential.)

One challenge that endures, however, is writing a book that will excite your base in your primary without preventing you from appealing more widely once you reach your general-election campaign. This cycle we think that challenge is trickiest for those Republicans hoping to keep a certain distance from former President Donald Trump (he is not a client).

For that reason, we are offering three options in the template: MAGA (designated with an **M**); MAGA-Adjacent (**MA**); and Democrat (**D**). Options without a partisan dimension carry no designation. We hope you'll be pleased to see how few choices you have to make to differentiate yourself. The parties are more alike than they let on! Before scanning and returning the document, just circle the bracketed option that is right for you, and feel free to customise the preface with adverbs and adjectives of your choosing (please limit yourself to 20 if you can help it):

I hear it everywhere I go in [America/name of state/my neck of (name of state)]: parents are fearful for their children's future, and the country's. To them, the politicians and the pundits in Washington, DC, seem more interested in calling each other [sample adjective opportunity] names than working together to come up with the kinds of common-sense solutions that everyday Americans sort out every evening at their kitchen tables.

I understand where that pessimism comes from. But I am still the optimist I've always been. I believe America's best days lie ahead. Yet we stand at a crossroads, in grave peril of going backwards. American values are under assault. Americans fear their devotion to opportunity and [**M**, **MA**: liberty;

D: equity] is held in contempt by some of the most powerful forces in the country.

Donald Trump [**M**, **MA**: restored; **D**: tried to destroy] so much that is great about America. The country has come to see that so clearly during the Biden presidency. We must now find ways to work together, as Americans, [**M**: recommitting to; **MA**: respecting; **D**: rejecting] President Trump's vision as we move forward to make the country truly great again. I know that what Abraham Lincoln so eloquently termed "the better angels of our nature" have not flown away from this great country yet.

But let's face it: the forces of [**M**, **MA**: wokeness; **D**: white nationalism] have become a clear and present danger to our basic freedoms, including our right to speak without being punished or to raise our children as we see fit. I am sorry to say this, but I have always been known to speak plainly and I'm certainly not going to stop now: the truth is that many of our opponents barely bother to disguise their racism any more.

Our fight for freedom must be local, national and global. China represents the greatest threat to our national interest since the cold war. Standing [sample adverb opportunity] against this menace means we must [**M**: not] continue to commit American resources to Ukraine's fight. We are [**M**: not] in the same grand struggle to keep alight the same democratic torch, even when the hour seems particularly dark and rainy and the matches are getting wet.

I do it my way

At home, the impunity with which big tech companies have manipulated our politics, degraded our discourse and invaded our privacy must come to an end. Twitter [**M**, **MA**: was; **D**: is] exhibit A of the problem. So is TikTok. In general we should, of course, (**MA**: not necessarily) expect our major corporations to embrace and promote our views [**M**, **D**: and; **MA**: but] we should insist that they move their supply chains away from China.

Similarly, the time has come to confront the debt we are piling on our children. We need to get the budget back into balance by cutting spending on wasteful initiatives like [**M**, **MA**: DEI programmes; **D**: oil subsidies]. But

regardless of what the other side says, touching Social Security or Medicare must be off the table. We stand on the shoulders of those who sit in wheelchairs.

I don't pretend that any of this is easy. But I've never believed in shortcuts. The Founders [**D**: had their flaws, but] bequeathed to us [**D**: what may yet prove] the greatest narrative in history. I have no doubt that, with the right authors to pen it, America's next chapter will be a very special one. ■

Read more from Lexington, our columnist on American politics:
How the Iraq war became a threat to American democracy (Mar 22nd)
Why did America's leaders stop caring about schools? (Mar 16th)
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Middle East & Africa

- Israel’s government is still in a bind
- Why Lebanon’s drivers can’t be legal
- Drought killed 43,000 people in Somalia last year
- Zimbabwe wants to come in from the cold

Holy land, unholy mess

Israel’s government is still in a bind

Binyamin Netanyahu is being pulled from one side to the other—and back again

Mar 30th 2023 | Jerusalem


AP

ISRAEL’S NEW right-wing government has reached its three-month mark with a lot to show for its brief stint in office. Since it was sworn in on December 29th, several tech companies, the jewels in the crown of Israel’s buoyant economy, have threatened to move abroad. Thousands of officers in elite reserve units of the armed forces have said they will refuse to report for duty. Trade unions and employers have together called for a general strike. And most recently President Joe Biden, the leader of Israel’s most important ally, has openly scolded the government, saying it “cannot continue down this road”.

This is a stunning reversal of fortune for Israel’s prime minister, Binyamin Netanyahu, who returned to office triumphant, after a year and a half in opposition. He has squandered his victory on a radical plan to weaken the powers and independence of the Supreme Court. Yet he failed to anticipate the strength of opposition of swathes of Israeli society. Business leaders, the

security establishment, even members of his own Likud party, have jibbed against his plan to remove checks and balances from Israel's democracy.



The Economist

On the evening of March 27th, as hundreds of thousands of protesters in Jerusalem, Tel Aviv and elsewhere brought the country to a standstill, Mr Netanyahu backed down, announcing a "time out" for negotiations over the legislation. Yet instead of calming tempers he inflamed them, spluttering that "there are a minority of extremists that are willing to tear our country to shreds." They were "escorting us to civil war and calling for refusal of army service, which is a terrible crime", he said.

On cue, gangs of violent far-right supporters of the government took to the streets, attacking their political opponents, journalists and Arab passers-by. The scene reminded some of Israel's neighbour, Egypt, where in the revolution of 2011 angry crowds had filled Cairo's Tahrir Square in the dying days of Hosni Mubarak's regime. In his inaugural speech three months ago Mr Netanyahu promised to broaden Israel's ties in the region. So far he has succeeded only in emulating some of his neighbours' worst tendencies.

Almost until the last Mr Netanyahu brazened it out, against the counsel of such level-headed advisers as the central bank's governor and the chiefs of Israel's military and security services, who want him to drop his judicial

plan altogether. At times in the past three months he has wavered. But the coalition of religious zealots, Jewish supremacists and homophobes that he relied on for his return to power insisted that he must not budge. At the very least they wanted him to pass a law giving them control of the committee that appoints judges to the Supreme Court, by April 2nd, the end of the winter session of the Knesset, Israel's parliament.

Ultimately it was the few remaining moderates in Likud, a party which once prided itself on being both nationalist and liberal, who persuaded Mr Netanyahu to hold back, for the moment. On March 25th Yoav Gallant, the defence minister, publicly warned that tensions over the judicial reforms were hurting the defence forces and security agencies. "This poses a clear, immediate and tangible threat to the security of the state," he said. Mr Netanyahu then announced his sacking.

Within hours of the statement, Israelis began pouring onto the streets again, besieging the Knesset and Mr Netanyahu's home in Jerusalem and blocking roads in Tel Aviv. Next day the trade unions and the country's main employers announced a general strike that shut ports, grounded flights at the main airport and brought much of the country to a halt. Influential Likud members with their own bases of power were among the union barons and mayors endorsing the strike. It was a final warning to Mr Netanyahu.

By then the game was up. Mr Netanyahu still had to spend long hours begging his more radical coalition partners not to abandon him. The price he had to pay to Itamar Ben-Gvir, leader of the ultra-nationalist Jewish Power party, was to promise a "national guard", in essence a publicly funded private militia, which would come under the control of Mr Ben-Gvir's national-security ministry.

Many in Israel's security establishment think this will be another of Mr Netanyahu's empty promises. But only a few months ago it was unthinkable that Mr Ben-Gvir, who has been convicted of backing Jewish terrorist outfits, could become the minister in charge of the police.

Mr Netanyahu has no alternative coalition. The centrist parties have refused to serve in a government with a prime minister indicted for fraud and

bribery, charges Mr Netanyahu still vehemently denies. So he remains at the mercy of his hardline partners in government.

Ducking and weaving

Mr Netanyahu has been forced to promise “true dialogue” to reach “broad agreement” on constitutional changes. Talks with a wary opposition have begun under the auspices of President Isaac Herzog, whose compromise proposal two weeks ago had been summarily rejected by the government. Neither side seems hopeful that a compromise can be reached now.

The coalition speaks in two tongues. One government official argues that these talks could provide an opportunity for Israel to grapple at last with its lack of a formal constitution and to clarify the status of its “basic laws”, to which the Supreme Court has given a quasi-constitutional standing. But another member of the coalition says: “This is just a tactical retreat.”

The legislation to curb the court is still on the Knesset’s agenda. Mr Netanyahu could bring it to a vote when the next session begins, on April 30th. His allies on the far right are calling for rallies of their own under the banner “We won’t let the election be stolen”. They are stoking resentment against “unelected elites” who are said to be defying the “will of the nation”.

In any event, Mr Netanyahu will struggle to get the legislation moving again. Secular and liberal Israelis are unlikely to back down over an issue they see as truly threatening Israel’s democracy. More efforts to ram through the changes will prompt mass protests again. Yet if Mr Netanyahu waters them down, he may lose the support of his far-right and religious partners.

Even if he does keep his coalition together and in power, he has gravely damaged himself in the eyes of business and the defence establishment, two constituencies vital for a prime minister who has based his entire career on growing the economy and keeping Israel safe. He has brought Israel to the brink of civil conflict and left it deeply divided. After the Passover festival, which begins on April 5th, Israelis are due to celebrate the 75th anniversary of independence. The mood is hardly likely to be festive. ■

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No to number-plates

Why Lebanon’s drivers can’t be legal

Corruption has closed down an entire department of state

Mar 30th 2023 | Beirut



Alamy

IT IS QUITE common, amid Lebanon’s current chaos, for cars without number-plates to breeze through the traffic and be waved through checkpoints with nobody batting an eyelid. Last year nearly all the employees of the country’s car-registration office were arrested on charges of corruption. Some 60 workers there are said to remain behind bars. The interior ministry admits that since October the entire department, known as the Nafaa after the area of Beirut where it is located, has been shut down. So the number of numberless cars cruising the roads has been rising.

The problem is that a ban in place since 2017 means that all public-sector hiring has been frozen, so the errant registrars cannot be replaced. In any case, few Lebanese people can survive on a standard public-sector salary of around $50 a month. The police are being trained to take over the role, but it could take them an age to get rid of the backlog.

For the past five months owners of new and imported cars have not been able to get number-plates. Nor has it been possible to register the sale of

used cars. You cannot get a driving licence or renew an old one. Insurance companies have been loth to do business with owners of unregistered vehicles.

The authorities are tight-lipped about the scandal and the investigation. No official will speak on the record. The state news agency has so far been the sole source of information.

To the surprise of nobody, the word is that the police seized piles of fake car-insurance papers and evidence of the sale of driving licences to people who had not passed their tests.

All the same, life on the shambolic roads is unchanged. The impossibility of getting your documents for anything in order is pretty normal in a country on the verge of collapse. As real wages have slumped in the face of rampant inflation, ordinary Lebanese are unkeen to work for almost nothing. Ministries, courts and schools have closed down, sometimes for months at a time.

Meanwhile the absence of number-plates has been a particular annoyance to the police and security service. For a start, it is almost impossible to track down numberless cars involved in accidents, let alone investigate those embroiled in more serious crimes.

The irony is that this latest cock-up was triggered by a rare effort by the authorities to reduce corruption, which remains endemic across the country and is one of the chief causes of the current national malaise and dysfunction. Indeed, since the mass arrest of people in the Nafaa, most of the lucky drivers who have somehow managed to register their cars and put number-plates on them have been able to do so only through the naughty old method of *wasta*—connections and bribery. ■

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Hunger in the Horn

Drought killed 43,000 people in Somalia last year

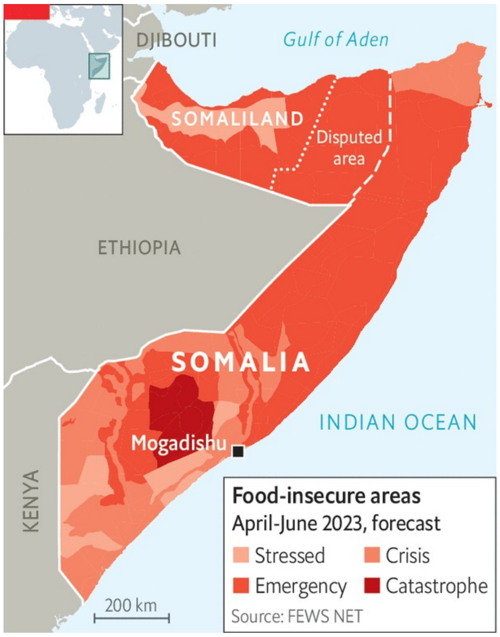
Weather, jihadists and the Ukraine war all share some of the blame

Mar 25th 2023



FIRST THE rains in Somalia failed in 2021. Then they failed again and again and again and again. For five wet seasons in a row, Somalis looked anxiously to the skies while their crops withered, their cattle perished and many people died of hunger or disease. A new report, released by UN agencies and the Somali government, estimates that there were 43,000 "excess deaths" in the country last year, relative to the typical level. Half of the dead were children under the age of five.

This hunger is the deadliest in Somalia since the famine of 2010-11, which claimed 260,000 lives. And it will get worse before it gets better. Researchers at the London School of Hygiene and Tropical Medicine, whose modelling underpins the report, project that in the coming months 135 people will die every day from drought-related causes. The Integrated Food Security Phase Classification (IPC), a UN affiliate that measures hunger, reckons that 6.5m Somalis will face "crisis", "emergency" or "catastrophe" levels of food insecurity between April and June (see map).



The Economist

The drought is the worst in the region for 40 years. Its barren shadow stretches beyond Somalia and into Kenya, Djibouti and Ethiopia, where millions more go hungry. Dry spells in the Horn of Africa are linked to La Niña, a temporary cooling in the Pacific Ocean that affects weather patterns worldwide, and which is only now relenting after three stubborn years. Its impacts may have been amplified by climate change, though the people of Somalia can hardly be blamed for that. They have emitted roughly as much carbon dioxide since independence in 1960 as Americans have in the past two and a half days.

Two exacerbating factors have turned trouble into tragedy. The first is Russia's invasion of Ukraine, which before the conflict accounted for 90% of Somalia's wheat imports. Soaring prices for food and fuel stretched the budgets of both families and aid agencies, says Shashwat Saraf, the regional emergency director for east Africa at the International Rescue Committee, a non-government organisation. In 2017, when Somalia last grappled with drought, a swift humanitarian response saved lives. This time the distraction of the Ukraine war (coupled with covid-19) meant that help was slower to arrive.

The second challenge is insecurity. Al-Shabab, an al-Qaeda affiliate, controls much of the countryside. Since August the Somali army and clan

militias have pushed it out of some central parts of the country. But the jihadists are entrenched in their southern heartlands, where hunger is severe. Aid workers fear being kidnapped or killed. In the past al-Shabab has demanded protection money to allow aid through. One recent study finds that violent incidents along transport routes can increase food prices as far as 900km away.

If food cannot move, the people must. Last year alone, 1.2m people were driven from their homes by drought. In all, some one in five Somalis, or 3.7m people, are internally displaced. Many of them crowd into settlements on the edge of towns, where aid workers can reach them in relative safety. People are dying from preventable diseases such as diarrhoea or respiratory problems, says Mamunur Rahman Malik, the World Health Organisation's representative in Somalia. Without protein from their animals, their immune systems are severely weakened.

Now Somalis are scouring the skies again for signs of the "Gu" rains, which are due next month. A slightly improved forecast and a recent drop in food prices offer hope that full-blown famine can be avoided. But even when this drought finally ends, it will take years for indebted families to restock their animals and assets. Governments and aid agencies should start planning for the next one by developing strategic water points and infrastructure, argues Guyo Malicha Roba of the Jameel Observatory, an international research partnership in Nairobi. Too often, their focus fades when the emergency does. "Immediately we get a better season, we go back and sleep," he says. ■

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Zimbonomics 101

Zimbabwe wants to come in from the cold

But that would require Zanu-PF to change its thuggish ways

Mar 28th 2023 | HARARE



IT IS A revealing journey from Robert Gabriel Mugabe International Airport to downtown Harare, Zimbabwe's capital. A new Chinese-built terminal is all but empty. On Airport Road the first billboard, commissioned by a Belarusian agriculture firm, features a photo of a red tractor and a welcome for Alexander Lukashenko, Belarus's president (pictured). Earlier this year this ally of Vladimir Putin became one of the few non-African heads of state to visit the isolated country.

Mr Lukashenko is not the only recent visitor, however. On February 23rd Zimbabwe's government welcomed a group of mostly Western and multilateral creditors to discuss its roughly $17.6bn of external debts. Until these are restructured the country cannot get an IMF loan and will remain largely locked out of international capital markets, as it has been since it began defaulting in 1999. That was the start of a decade of economic madness, invasions of white-owned farms and hyperinflation, complete with paper notes each worth 100trn Zimbabwe dollars. Real GDP per person fell

by a half in US-dollar terms; today it is still lower than it was at independence in 1980 (see chart).



The Economist

The talks have raised hopes in Harare. Some in the West would like to give the country another chance, partly out of resignation and partly because of shifting geopolitics. But the problem remains Zanu-PF, the ruling party. After an internal coup in 2017 that toppled Robert Mugabe, there were several attempts to offer his successor, Emmerson Mnangagwa, a road map to normal relations. Every time, repression or tales of corruption on a massive scale torpedoed the efforts. So long as his regime meddles in the economy and is accused of rigging elections, which are due to be held by August, it will struggle to come in from the cold.

To avoid that, Zimbabwe must show Western governments progress in two areas. The first is the economy. Zimbabwe's government pretends that it has an orthodox approach to macroeconomics. Official figures suggest a narrow fiscal deficit. It has its own currency, the Zimbabwe dollar. Like any central bank, the Reserve Bank of Zimbabwe uses a benchmark interest rate to tame inflation.

The reality is more eccentric: call it Zimbonomics. The country's debts are larger than they seem. The IMF last year estimated that "unfunded

liabilities" amounted to $5.75bn, including $3.25bn in compensation owed to white farmers. Then there is what technocrats call the bank's "quasi-fiscal operations": in plainer language, printing money. This is used to subsidise farmers and miners or to buy American dollars to keep up payments on the few foreign loans still being serviced.

Most worrying is the interference in currency markets. Rather than leaving the value of the Zimbabwe dollar to the whims of the market, the central bank confiscates a portion of exporters' hard-currency revenues, then auctions greenbacks to a select group of buyers at a cut-price rate. The de facto subsidy is worth the equivalent of 2.5% to 5.25% of GDP a year. As well as depleting trust in the local currency—and keeping annualised inflation at more than 200%—Zimbonomics creates arbitrage opportunities for a lucky few.

Airing dirty laundry

Such shenanigans reinforce the idea that well-connected elites and ordinary people play by different rules. The Sentry, an American watchdog, will soon publish two reports. The first alleges that some of the proceeds of the sale of a chrome mine went to senior politicians. The second looks into the affairs of Kudakwashe Tagwirei, an ally of Mr Mnangagwa (pictured right) who has been placed under sanctions by America since 2020, for allegedly "materially assisting senior Zimbabwean government officials involved in public corruption". And in March the central bank threatened to sue Al-Jazeera, a Qatar-based network, over a documentary about gold-smuggling. The bank said in a statement that the film falsely created the impression that it was "Southern Africa's laundromat…for an alleged African gold mafia involved in illicit gold dealings, corruption and money-laundering". It said it dismisses these "false allegations".

Zimbonomics is not the only obstacle to improved relations. The other is the need for political reforms. Under the Zimbabwe Democracy and Economic Recovery Act, legislation first passed in 2001 and renewed by Congress in 2018, American support for financial assistance by multilaterals such as the World Bank depends on, among other things, evidence that the government is serious about the rule of law. Yet ahead of the general elections Zanu-PF is putting not so much as a thumb on the electoral scale as a bloody fist.

In a poll published in February, 53% of respondents said they would vote for Nelson Chamisa, the leader of the main opposition party, Citizens Coalition for Change (CCC), in the presidential election. Just 40% said they would opt for Mr Mnangagwa. “People look at Mugabe and say that things have got worse,” says Mr Chamisa. He would almost certainly win a free and fair election, even though many outsiders and people in the country harbour doubts about his tendency to hoard power.

In any case, the election will be neither free nor fair. The CCC is unable to campaign: 79 of its rallies were banned or broken up in the first two months of this year. Activists are regularly arrested or beaten. Mr Chamisa’s car was shot at in 2021. “I’m lucky to be alive,” he says.

More subtle tricks are evident, too. State-owned media ignore the opposition. The notionally independent election commission refuses to hand over an electronic file of the voters’ roll and charges $187,000 for a hard copy. Voter-registration centres are scarce in opposition strongholds. Constituency boundaries feature gerrymandering that would shame Texas.

Last year every MP was offered a $40,000 “loan” by the government. Cabinet ministers each received $500,000. Academics have been cajoled into making oaths of loyalty to the regime. Independent judges are hounded. “The judiciary is worse than it has ever been,” says Beatrice Mtetwa, a human-rights lawyer. A new bill awaiting Mr Mnangagwa’s signature would give the government the right to ban NGOs with barely any judicial recourse. “It is unsophisticated, brazen authoritarianism—the stuff of Pol Pot and Idi Amin,” says Tendai Biti, a vice-president of the CCC.

After at least two decades of stagnation, several Western countries are reflecting on the effectiveness of isolating Zimbabwe. Some officials would like at least to offer Zanu-PF objective targets it would need to hit to get assistance (for instance, improvements in scores given by international human-rights NGOs). Some of this reflects wider geopolitics: Zimbabwe is Africa’s largest lithium producer and China is snapping up its supplies.

Losing interest

But a big shift in Western policy remains unlikely. Zimbabwe, for all its emotional resonance in parts of the West (crudely put, Zimbabwe is to Britain what Cuba is to America), is just not important enough to warrant going easy on Zanu-PF. America, where policy towards Zimbabwe is determined by the few politicians in Congress who care about it, is unlikely to shift.

The worry for Zanu-PF would be if its traditional allies get fed up with its antics. China, which has restructured loans to Zimbabwe on at least five occasions since 2000, would like to be paid back. Even South Africa, whose ruling African National Congress has long propped up its fellow liberation party, may one day rethink its indulgence of Zanu-PF, if only for cynical reasons. It is losing votes to opposition parties that want it to send back the possibly millions of Zimbabweans who have fled penury and persecution at home. All the Belarusian tractors in the world could not compensate for a change of approach by South Africa.

South Africa is not the only destination for émigrés. The latest popular route is to Britain, where Zimbabweans fill gaps in the National Health Service and social care. Almost 13,000 Zimbabweans were granted skilled-worker visas in 2022, a 25-fold increase since 2019; only India (with a population 88 times larger) was granted more health-worker visas. Ultimately Zimbabwe will fundamentally change only when its ruling party is no longer in charge. Until then Zimbabweans will continue to vote with their feet. ■

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The Americas

- Mexico now receives more remittances than China
- Venezuela’s autocrat launches a massive corruption probe
- Refugee-friendly Canada tightens its border with the United States

Paying back

Mexico now receives more remittances than China

Migrants are sending record sums home—and shaping Latin America for the better

Mar 30th 2023 | ANAMORÓS AND MEXICO CITY



Getty Images

WHEN COVID-19 began to spread in early 2020, bosses in the United States booted millions of foreign-born workers from their jobs. That risked catastrophe for households across Latin America and the Caribbean, many of which cover essential expenses with money sent from relatives abroad. What happened next was a surprise. After crashing briefly, the amount remitted to these countries soared. Last year remittances reached a whopping $142bn, 48% more than in 2019.

The surge owes much to stimulus in the United States, which put dollars back in pockets, as well as to the generosity of migrants, who have dug deep to help relatives in need. Yet bumper flows during the pandemic capped what had already been a decade of fast-rising remittance growth. Over ten years the sums sent home annually to countries in Latin America and the Caribbean have more than doubled, according to the World Bank. That is a swifter rate of increase than in any other region.



The Economist

Mexico receives by far the biggest amount. Its remittances rocketed from the equivalent of 1.9% of GDP in 2012 to 4.2% in 2022 (around $60bn). In 2021 it became the world's second-largest beneficiary, jumping ahead of China (India is number one). Money sent home from abroad is even more important to many of its neighbours. Twelve countries in Latin America and the Caribbean get the equivalent of at least 5% of their GDP from remittances. In El Salvador, Haiti, Honduras and Jamaica these now amount to more than one-fifth of national output (see chart).

This cash is some consolation for societies that have lost armies of hard-working youngsters, mostly to the United States. There is not much for them at home: moribund economies are a big reason why people leave. The IMF estimates that GDP across Latin America and the Caribbean will increase by only 1.8% this year. Manuel Orozco of the Inter-American Dialogue, a think-tank, says that "failed development models" across the region have favoured big mining and agricultural companies while neglecting small and medium-sized firms. Workers in this "missing middle" of the economy have little choice but to go.

Remittances are changing places far off the beaten track. In Anamorós, a town of around 17,000 people in El Salvador, large houses constructed with foreign wages loom over traditional dwellings. Local families that do not

have relatives in the United States can be counted "on the fingers of one hand", says Iveth, a municipal worker. She gets $600 a month from three brothers who work in Texas; that pays for her car and helps her support a fifth sibling, who has a disability. On the outskirts of town, Aracely Benítez sits in a shop that she has set up in the garage of a house built with funds that her son, a restaurant worker in Los Angeles, has sent back during his 12 years abroad. At least a dozen nearby homes were paid for in a similar fashion. Plots are laid out for more.

Most remitted cash is spent on essentials such as food. That helps keep people out of poverty. One recent study of migration from Mexico and six Central American countries concludes that, over 35 years, every 10% increase in the number of migrants working in the United States correlates with a roughly 9% decrease in the number of people back home who were living on the equivalent of $1.90 or less a day.

People also use the cash to pay for private health care, a boon given shoddy public services. In Haiti, which is racked by gang violence and where there is little or no functioning state, remittances were the equivalent of 23% of GDP in 2022. Jean-Robert Jean-Pierre, a 67-year-old Haitian, says "you have to pray to God to never get sick" unless someone is helping; in his case a friend who sends $400 a month.

Education benefits, too. Migrations can harm children if it means growing up away from a parent. One survey found that, in countries in the region that are typical sources of migration, between 7% and 21% of children are missing at least one parent. But research carried out for UNESCO, which weighed up the results of 11 studies in seven countries, found that remittances appeared to drive up the amount households in Latin America and the Caribbean spend on schooling by between 23% and 83%.

Remittance flows are helpfully counter-cyclical. As was the case during the pandemic, they tend to swell when other sources of foreign income, such as tourism and investment, start to fall. That helps smooth consumption.

Yet economies that rely on remittances can also suffer unwelcome side-effects. In theory they can cause local currencies to appreciate, making

exports less competitive. There is some evidence that this has happened in parts of Central America, though the impacts appear to be small.

In some parts of the Americas remittances are probably reducing inequality, according to the international-development arm of the United States government (USAID). That is because people who see the least opportunity at home are most likely to try their luck abroad. The reverse may be true in very poor locations, where only households that are doing comparatively well can find the money that it costs to send loved ones across borders.

Studies suggest that, on balance, remittances have a small but positive effect on growth. One drawback is that receiving remittances can discourage people from working, which limits the extent to which foreign cash drives lasting development at home. Research suggests that, in Honduras, receiving remittances reduces an individual's likelihood of being employed by nearly nine percentage points on average, compared with people who are otherwise similar. Ercelia Benítez, who runs a café in Anamorós (and is a cousin of Aracely), has spent two months trying to hire someone. She blames the influx of foreign cash.

Yet across the region there exist many more encouraging tales. Julisa Morena, a mother of two in Chiapas, Mexico's poorest state, says that food, bills and school uniforms eat up much of the $100 her husband sends her each week from Arkansas. But over four years she has managed to save enough to buy land and some cows. In a few years, she thinks, these will be making enough cash for her husband to come back.

Governments could do more to maximise the benefits that can flow from their diaspora's success. For years Mexico's federal and local governments persuaded migrant groups to invest in public projects by offering to match any money they chose to donate to small-scale projects back home, such as better roads or new community buildings. "People loved it," says Roxanna Hernández, who worked for the programme in San Luis Potosí state. But the project was suspended in 2018. Dilip Ratha of the World Bank says Latin American countries could also follow in the footsteps of Israel, India, Nigeria and other countries which have raised money for investments by selling bonds to emigrants.

A priority should be to push up the share of remittance recipients who have bank accounts, reckons Mr Orozco. These people have more power to save than others. But in much of the region remittances are withdrawn in cash from wire services and never returned to the banking system; any money not spent is often squirrelled under mattresses. Formalising these savings would increase the amount lenders can invest in local businesses. And drawing more people into the banking system would also allow them to use financial products, such as credit, that can further improve their lot.

More than half of remittance recipients in El Salvador do not own a bank account. Nayib Bukele, El Salvador's millennial president, has pointed to remittances to justify his government's efforts to promote the use of bitcoin, which became legal tender in 2021. He has said that adopting the cryptocurrency can help reduce the costs involved in receiving money from abroad. There is no good evidence of that.

Some research suggests that people who receive remittances are more likely than others to emigrate themselves. Helping them build assets makes it more likely that they—and their money—will hang around. Either way, the region will continue to benefit from those who make the journey north. ■

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Oily business

Venezuela’s autocrat launches a massive corruption probe

Nicolás Maduro targets the decrepit state oil giant

Mar 30th 2023 | Caracas



OIL HAS BEEN the backbone of Venezuela’s autocratic regimes for decades. According to Juan Pablo Pérez Alfonzo, the country’s oil minister in the 1960s and one of the founders of the Organisation of the Petroleum Exporting Countries, the fuel was not “black gold”, but the “devil’s excrement”. A corruption probe announced by the dictatorial government of President Nicolás Maduro on March 17th suggests there may still be some truth in that.

So far the probe has led to the resignation of Tareck El Aissami, the oil minister, who has not been named in the investigation. Nearly two dozen people have been arrested, including politicians and the cryptocurrency regulator. Eleven other people are being sought by the state prosecutor. The episode offers a rare window into the chaos and corruption at the top of Petróleos de Venezuela SA (PDVSA), the state oil giant which Mr Maduro,

following in the footsteps of his late predecessor, Hugo Chávez, has driven to near-ruin.

According to company documents seen by Reuters, more than $3bn has gone missing from PDVSA since 2020 and is likely unrecoverable. There is a further $18bn missing to potential bad debt or fraud. In total, 84% of the value of its invoiced shipments over the last three years remains unpaid. Some of the recipients claim they did pay, but the amounts never showed up in the company coffers. State media show images of private jets and commercial buildings bought allegedly with dodgy funds.

These losses for the enfeebled company are grave. They came about partly because the firm became more reckless in order to evade American sanctions, which were imposed on PDVSA in 2019 after Mr Maduro rigged the election in 2018.

Since then, PDVSA has been selling oil at a heavy discount through a byzantine network of intermediaries, mostly to independent refiners in China. The middlemen bypass American sanctions, sometimes deploying so-called ghost ships which switch off their tracking devices or change their names at sea. Some of the companies trading the oil were set up just weeks before they dealt with PDVSA. A few may have been fraudulent and never intended to pay for the cargoes they received.

Rumours of the missing billions and dubious trading practices have been swirling around Caracas, the capital, for months. “Entire oil tankers are being offered in exchange for bitcoins,” one businessman claimed last year. He said the cash-strapped government was seeking to settle its bills with crude oil as part of a barter system of payment. “We are all oil traders now,” he remarked.

But the government had not said anything publicly about the brewing scandal until March, when it confirmed the first arrests had been made. One theory for the delay is that Mr Maduro felt he needed an explanation for a deteriorating economy. Amid a shortage of dollars, the central bank has been struggling to prop up the local currency, the bolívar. It has slumped sharply since October, falling by two-thirds against the dollar. This undermines Mr Maduro’s claim that he has moved the country on from the economic

catastrophe of the past decade. Rising inflation is also a problem for him ahead of presidential elections planned for 2024.

Blaming malpractice at PDVSA for such problems is politically useful. Some speculate that Mr Maduro's probe is partly designed to send a message to his internal opponents. But punishing those responsible is also a delicate business in the regime's nepotistic world. In January Asdrúbal Chávez, then the head of PDVSA, was removed from his post. He is a cousin of the late autocrat. That might explain why no mention was made in public when he was relieved of his duties.

Francisco Monaldi of Rice University in Houston, Texas, doubts that Mr Maduro is being particularly strategic. Instead, what the probe hints at is something simpler and sadder: that the country's oil industry is "a massive corruption machine in which very little money at all ends up benefiting the Venezuelan people". ■

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A stricter welcome

Refugee-friendly Canada tightens its border with the United States

Even so, the country is set to welcome more migrants through legal routes

Mar 30th 2023 | Roxham Road



WHEELING TWO enormous suitcases and carrying a bulging shoulder bag, Isaïe Jean-Baptiste, his wife Stephanie and their two-year-old daughter Gloria stand on one side of a shallow ditch. On the other is a member of the Royal Canadian Mounted Police. "If you come any further you will be crossing into Canada and you will be arrested," says the Mountie. "Understand?" Mr Jean-Baptiste, an agricultural engineer from Haiti, nods his head and steps forward to be arrested, processed and then admitted into Canada as a refugee.

Mr Jean-Baptiste is one of many asylum-seekers who have crossed Roxham Road, an unofficial border point between Quebec and New York state, in the past year. On March 24th, however, Justin Trudeau, Canada's prime minister, struck a deal with President Joe Biden to curb such crossings. The two leaders amended a "safe third country" agreement, which previously let Canada send back asylum-seekers to the United States only if they crossed at

official border points. Now nearly all asylum-seekers crossing the 8,900km (5,525 mile) border can be sent back to the United States, unless they are an unaccompanied child or have relatives in Canada.

Last year 40,000 migrants were caught crossing the border—the highest number since 2017, when illegal crossings started to be tracked. Despite the new agreement, Canada's government remains keen on accepting migrants through legal routes. Mr Trudeau wants the country to welcome 500,000 new permanent residents each year by 2025. That is twice the number admitted on average between 2001 and 2014. It hints at the paradox of Canada: although it has strict immigration laws, it is far more generous than the United States.

It helps that few Canadians are opposed to migrants. Some 85% of those surveyed believe immigration is good for the economy and 69% support current or increased immigration levels. Fully 76% would like to see the country accept more refugees. By contrast, 30 years ago, when half as many immigrants came each year, 70% felt there was too much immigration.

Some of this generosity is pragmatic. Around 1m posts are unfilled across the country, about 6% of the total. With an ageing population, things are likely only to get worse. Fifty years ago there were seven workers for every pensioner; by 2035 the ratio is forecast to be 2:1. Already more than 40% of Canadians are 55 or older.

Pro-migration sentiment also stems from the fact that a quarter of Canadians today are themselves immigrants. Figures released on March 22nd by Statistics Canada show that the country's population rose by more than 1m in 2022, or 2.7%, to 39.5m. That is the highest annual population growth rate in 60 years. Nearly all this increase was due to migration.

Partly because of the widespread support for migration, and the fact that several constituencies which determine general elections have large immigrant populations, few opposition politicians have spoken out against Mr Trudeau's ambitious targets. Quebec is an exception. It is the only province to which the federal government has granted the right to determine how many migrants it admits each year. In 2018 the governing Coalition Avenir Québec, a conservative party, reduced the province's immigrant

intake from 50,000 to 40,000. Last year François Legault, its premier, equated increased immigration with "extremism and violence".

Mr Legault apologised and has subsequently toned down his language. This is probably because business owners are particularly concerned with the shortage of workers. Quebec's population is older than elsewhere in the country, says Karl Blackburn, head of the Conseil du patronat, an employers' group that is calling for higher immigration levels and wants to allow temporary foreign workers to become permanent residents. "These people aren't stealing anyone's job," he says. "They are contributing to the growth of Quebec." As with that province, so too with Canada.■

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Europe

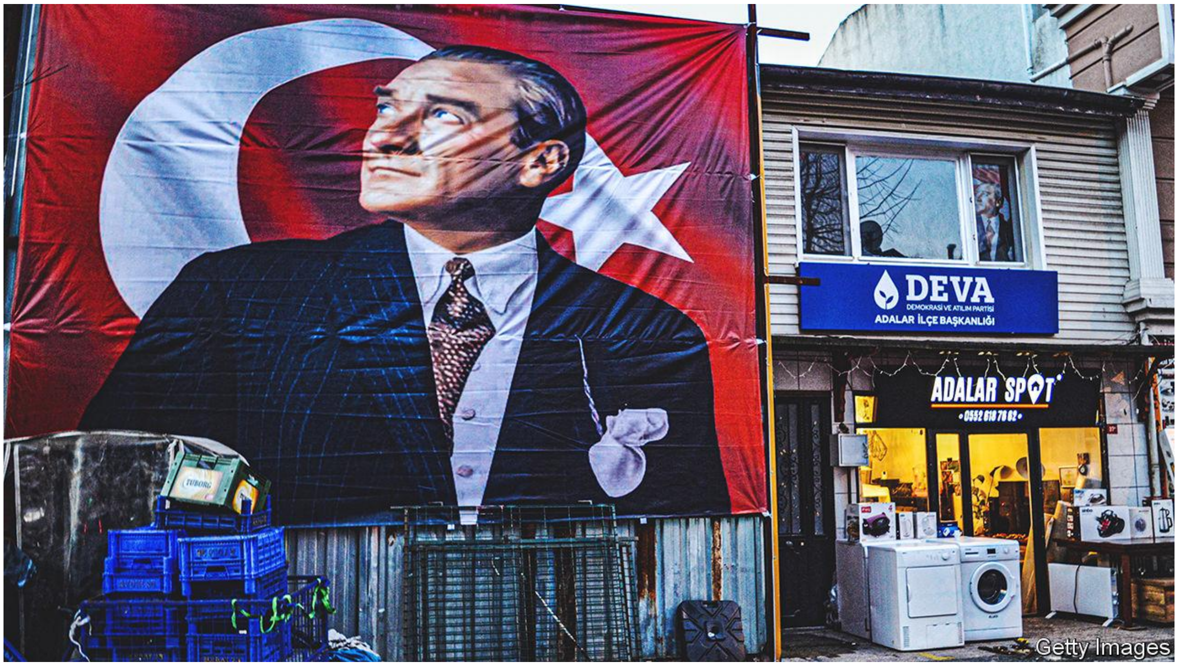
- Ahead of a critical election Turkey’s economy is running on borrowed time
- Why Russian oil and gas is still flowing through Ukraine
- Belarus’s beleaguered opposition is flirting with violence
- What to do with Russia’s abandoned luxury yachts?
- More strikes and demonstrations against French pension reform
- A surge of migrants is reaching Italy
- Europe is unprepared for what might come next in America

Election economics

Ahead of a critical election Turkey's economy is running on borrowed time

With the lira down 80%, Recep Tayyip Erdogan's medicine isn't working

Mar 26th 2023 | ISTANBUL



VISITORS TO TURKEY are often surprised to discover that in a country supposedly consumed by economic malaise, the restaurants, at least in large cities, are bursting with customers. But appearances are deceptive. A big reason for the bustle is that middle-class Turks would rather spend their earnings today than watch inflation, officially measured at 55% year on year but widely believed to be much higher, burn through their savings tomorrow.

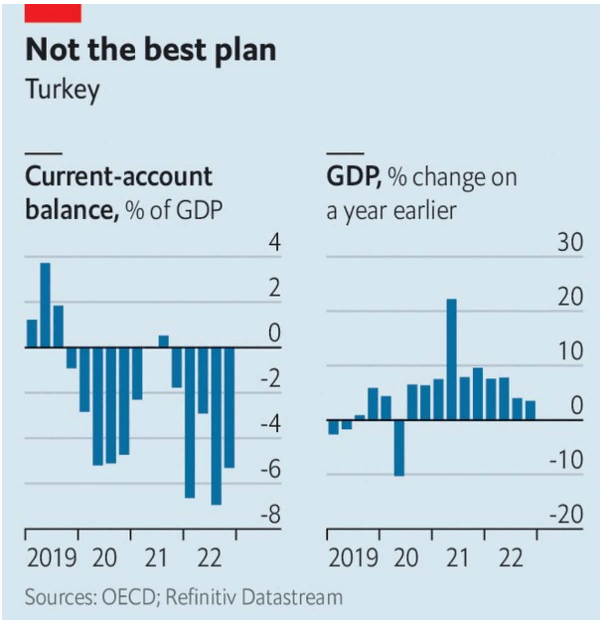
Turkey's president, Recep Tayyip Erdogan, has bullied the central bank into slashing interest rates in the face of galloping prices, allowing the lira to plummet. He hoped this would turbocharge the economy by making exports cheaper and encouraging domestic production. The policy mix, repackaged as Turkey's "new economic programme", would bring inflation down to single digits ahead of this year's presidential and parliamentary elections, his finance minister pledged. Things have not gone according to plan.

Imports remain necessary but are now much more expensive. Hence they have dwarfed exports, landing Turkey with its biggest absolute current-account deficit in four decades. Annual inflation has dipped from 85% last year, but remains by far the highest in the OECD, a group of mainly rich countries. Growth continues, thanks less to exports than to an unsustainable surge in consumption. Mr Erdogan's economic model seems to have run its course.

The poor economy, compounded by the earthquakes that killed over 50,000 people in the country's south in February, has darkened Mr Erdogan's prospects. Opinion polls show him trailing the opposition's joint candidate for president, Kemal Kilicdaroglu, by four or more points. For a populist strongman who enjoys a servile news media and control over the country's institutions, that is hardly insurmountable. But it is the biggest hole Mr Erdogan has faced before any major election.

How he plans to dig himself out of it remains unclear. The elections are set for May 14th, with a run-off on May 28th if no candidate gets an absolute majority in the presidential contest. More tends to happen in Turkey in two months than in most countries in two years, but Mr Erdogan seems to be running out of ideas, especially regarding the economy. Sensing a historic chance, the opposition is closing ranks. On March 22nd the country's main Kurdish party said it would not, as had been feared, field its own candidate for the presidency, suggesting it would endorse Mr Kilicdaroglu and avoid splitting the opposition vote.

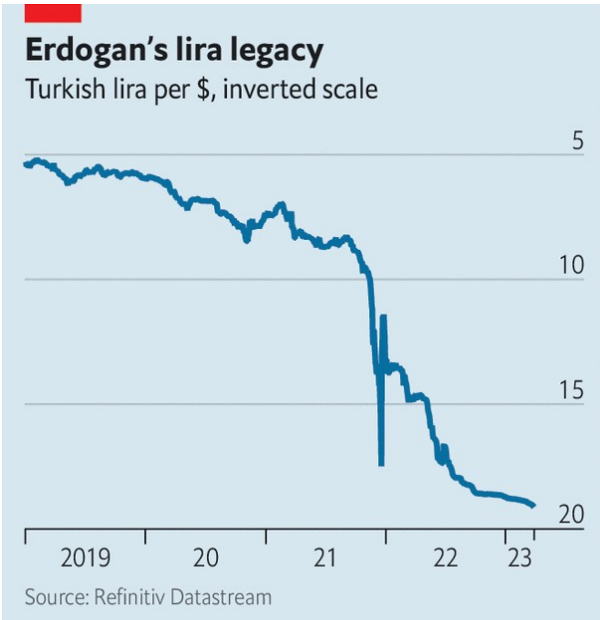
Many fear that Mr Erdogan may revert to rabble-rousing. One option may be a renewed confrontation with Greece over maritime borders, says Selim Koru at the Economic Policy Research Foundation of Turkey. An election in Greece, also now expected in May, raises the risk of a clash (of words or, at worst, of arms). Domestic politics may favour hot heads over cooler ones. "I'm not sure these guys will go quietly," says Mr Koru of Mr Erdogan and his circle.



The Economist

When it comes to the economy, the Turkish leader’s options are limited. Over the past three months the government has raised the minimum wage by 55%, more than doubled the basic pension and passed a law making millions of Turks eligible for early retirement. Mr Erdogan may announce further handouts during Ramadan, which began on March 23rd. His best hope, however, is that the economy will keep humming until the elections. It grew by a sprightly 5.6% last year, largely thanks to laughably cheap loans and spiking consumer demand.

Mr Erdogan holds all the economic and monetary policy levers in his hands, but has been pulling them in opposite directions. Cuts to the benchmark interest rate, by more than ten percentage points since 2021, drove the lira to new depths last year. That helped exports reach a record $254bn. Imports, however, surged to $364bn (40% of GDP), also a new high. The current-account deficit, Turkey’s balance of payments with the rest of the world, ballooned to $10bn in January.



The Economist

Emergency measures stopped a run on the lira in 2021. But since it began sliding again last year, Turkish officials have been rationing bank loans and selling billions of dollars'-worth of foreign reserves, leaving the central bank's coffers depleted. Having lost 80% of its dollar value in five years, the lira has now stabilised, but only at the expense of the exporters Mr Erdogan's model was expected to benefit. Turkish exporters now say the currency is overvalued, and is squeezing profits. "They have become exchange-rate addicts," says Cevdet Akcay, an economist. "They were ecstatic, and now they're complaining again."

Ordinary Turks, meanwhile, are stuck with the bill for Mr Erdogan's experiment, in the form of a cost-of-living crisis. Other than managing the exchange rate, the government has done next to nothing to keep price growth in check. On March 23rd the central bank kept the benchmark interest rate unchanged, at 8.5%. Adjusted for inflation, credit in Turkey is cheaper than anywhere else in the world.

The economy is running on borrowed time, says Selva Demiralp of Istanbul's Koc University. "They're trying to sustain the current system until the elections, before it blows up," she says. Without a return to factory settings, Turkey may soon face another currency crisis and a fresh surge in consumer prices. Bringing inflation under control will be hard enough for a

new government, says Mr Akcay. “For this one, it has become impossible.” ■

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Vestigial network

Why Russian oil and gas is still flowing through Ukraine

Even in war, old pipelines and contracts die hard

Mar 30th 2023 | KYIV



IT IS, AS a Ukrainian energy consultant who prefers to remain nameless put it, “ironic and ridiculous”: in the midst of Russia’s savage war on Ukraine, Russian oil and gas continue to flow through Ukrainian pipelines. Before the war, Europe relied on Russia for 40-45% of its imported gas and about a quarter of its oil. Russia has since tried to bully Europe into dropping economic sanctions by throttling supplies; Europe in turn has almost entirely unplugged itself from Russian energy. But not entirely. The continuing flow is partly a hangover from the old system, and partly thanks to contract law, market reality and political expediency.

Take oil first. Last December Europe banned imports of sea-borne oil from Russia (with a few temporary exceptions). But in a concession to landlocked countries pipelines were exempted. In retaliation, Russia shut off the Northern Druzhba pipeline to Poland and Germany. Yet oil continued to flow via the Southern Druzhba pipeline through Ukraine to refineries in the

Czech Republic, Slovakia and Hungary. The latter helps Vladimir Putin maintain his special relationship with Viktor Orban, Hungary's prime minister, who consistently lobbies against EU sanctions.

Sanctions bar these three countries from exporting the fuel they make from their Russian crude to others, with one ironic exception: they can send it to Ukraine. Ukrainian refineries, mostly in the country's war-torn east, have been badly hit. With its ports on the Black Sea blockaded, the only other way Ukraine can get petrol is by truck or train. "In terms of a cynical military strategy, we still need this oil," says the Ukrainian energy adviser.

Russian gas, meanwhile, has never been blocked. Yet as soon as Europe imposed sanctions, Russia began to turn off the taps. Despite the mysterious destruction of the Nord Stream pipeline in September, Russia could have supplied European customers with gas through the Ukrainian network. But when Ukraine shut down a pipeline entry point in occupied territory, Russia refused to pay full transit fees and threatened to cut off supply. Ukraine offered to reroute the gas, but Russia declined. Naftogaz, Ukraine's state energy firm, has taken Gazprom, the Russian one, to the International Court of Arbitration to resolve the dispute.

Mr Putin's warning that Europe would "freeze" without Russian gas never panned out: the winter was warm, and Europe found other sources. By March Russia's share of European gas imports had fallen to a bit over 10%. About half of that is liquefied natural gas bought from a private Russian company; another quarter goes through the TurkStream pipeline to southern Europe. The rest goes through Ukraine, mostly to Slovakia and Austria. Analysts expect Russia to wind down this diminishing flow. The contract between Naftogaz and Gazprom runs out at the end of 2024, and it is hard to imagine it being renewed.

Ukrainian officials say as long as Europeans are buying Russian gas they will honour their contract to transport it. It would not be in their interests to jeopardise European support by kicking up a fuss. Keeping Ukraine's network open also helps European clients who are suing Gazprom for cutting them off: otherwise the Russians might argue that the Nord Stream explosion made delivery impossible.

Ukraine's own demand for gas has been reduced, with much of its industry destroyed. The country produces almost enough for its needs. But it imports most of its oil, especially diesel for the generators it uses during blackouts—and for military vehicles. Ukraine buys diesel from various traders, and its origin is often not known. But the Ukrainian energy adviser confirms, half smiling, that a bit of the fuel powering Ukrainian tanks is probably Russian.■

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Meet the hackers

Belarus's beleaguered opposition is flirting with violence

Is a liberation army forming?

Mar 30th 2023 | WARSAW



THE CYBER PARTISANS, a group of anonymous dissidents, have hacked their way to the very top of Belarus's authoritarian regime. They claim that last year when Alexander Lukashenko, the country's dictatorial president, said he was more scared of cyber weapons than nuclear weapons, he was thinking of them. "What opposition group can say that they have the passport information of all its country's citizens :)" typed a hacker identified only as Cyber #3. They have reason to grin. The Cyber Partisans are the cutting edge of a militant wing of Belarus's opposition that is gearing up for action.

In a Warsaw safehouse, one dissident preparing to return to Belarus fidgeted nervously with a lighter. "We are waiting, but we don't know what we are waiting for," he complained. "Everyone is frustrated. Everyone is scared." Crackdowns have caused many to abandon the dangerous game of dissident

politics entirely. That despair has, however, led some to consider more radical methods.

Sviatlana Tsikhanouskaya, the challenger who undoubtedly won the election that Mr Lukashenko stole in 2020, has kept the flag of opposition flying from exile in Lithuania; but radicals want more. “These people wanted her to become Belarus’s Charles de Gaulle,” says Artyom Shraibman, a political analyst affiliated with the Carnegie Endowment for International Peace. “A leader-in-exile that could create a liberation army. They were disappointed that what we have is a diplomat-in-chief.”

So they have set about creating that army themselves. In December the Cyber Partisans merged with the Kastus Kalinousky Regiment, Belarusian volunteers who are fighting the Russians in Ukraine. The Cyber Partisans say they are using terabytes-worth of hacked data to help Ukraine and some Western countries root out Russian and Belarusian spies.

The Kalinousky Regiment and the Cyber Partisans say that once they are finished with Vladimir Putin in Ukraine, they want to liberate Belarus. Katia Glod of the European Leadership Network, a London-based think-tank, reckons these groups see themselves as an emerging force that could challenge Ms Tsihanouskaya’s more cautious leadership. “We are already part of hacktivist history,” says Cyber #3. “Never before has the Belarusian opposition had its own military units and its own cyber-army. We have never been stronger.”

“Belarusians need to be prepared,” says Pavel Kutkha, a recruiter for the Kalinousky Regiment in Warsaw, with boxes of equipment destined for his soldiers fighting in eastern Ukraine’s stronghold of Bakhmut stacked around him. “The only way Belarus will change is through force. If we want to be free, we have to win our freedom with weapons and blood.” For now, the focus is on Ukraine; but what would happen, he wonders aloud, if his men popped up in Brest or Gomel (two big cities in Belarus) after Russia loses?

Ms Tsihanouskaya bristles when asked about the criticism she receives. “You do not have the tools to do this. You are not ready psychologically for this,” she says about those that want to take the armed fight to Mr Lukashenko. This is not unreasonable, as she must maintain a broad church;

but frustration is breeding fragmentation abroad and disappointment among supporters at home. Even so, she now describes Belarus as “occupied” and those in the Kalinousky Regiment as “heroes”. She has built links with ByPol, a group of ex-security personnel that claims it has 600 members and is training partisans in Poland and running operations inside Belarus, including a hit on a Russian airbase near Minsk, the capital.

Mr Lukashenko has used the militants to justify even fiercer repression. His forces have been running periodic counter-terrorism exercises. In addition, they have been hunting partisans who disrupted Russian military trains at the start of the invasion of Ukraine, and those still sharing details about Russian movements with monitors abroad. Violent or not, his opponents face an uphill struggle. ■

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Stranded assets

What to do with Russia's abandoned luxury yachts?

Seizing them was the easy part

Mar 30th 2023



COURTS IN THE mostly Western countries applying sanctions on Russian oligarchs have ordered the seizure of at least four of their grand yachts: the *Amadea*, the *Tango*, the *Meridian A* and the *Amore Vero*. But many more remain in limbo, running up maintenance and harbour fees while they are being investigated. Some of the cost of their upkeep ends up being paid by taxpayers.

Stopping suspect boats from leaving port has proved easier for governments than conclusively demonstrating their ownership. Few suspect vessels are foolish enough to fly the Russian flag these days, and many of the oligarchs who have been placed under sanctions have long used front companies to conceal their assets.

America's government is examining ways to sell off the handful of yachts it has seized so far, hoping to use the money to fund Ukraine's war effort or

reconstruction. This is easier said than done. Alex Finley, a former CIA officer and now a spy novelist who has tracked the movements of suspect yachts, says that seizing assets was an important tool for destabilising Mr Putin's support network and "the yachts are the biggest catches".

Nevertheless, she points out that selling off a boat the size of a football field and worth half a billion dollars is no easy feat. There are simply not a lot of potential buyers, and even fewer who might wish to gallivant about in the former property of a Russian oligarch (who might take it rather badly). Given how quickly luxury yachts deteriorate without maintenance, many could end up fetching only knock-down prices.

Frozen yachts have become a potential shipping hazard even in places where the authorities are not enforcing sanctions. The government of Antigua and Barbuda declared in March that it would amend its law to allow it to sell the *Alfa Nero*, a yacht under American sanctions that has been cluttering up Falmouth Harbour since early 2022. The *Alfa Nero* allegedly belongs to Andrei Guriev, a Russian billionaire. But the vessel appears abandoned, with fuel, crew and general upkeep going unpaid for. ■

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Impasse

More strikes and demonstrations against French pension reform

Protesters still think they can force Emmanuel Macron to back down

Mar 30th 2023 | PARIS


Lucy North/SOPA/Zuma/Eyevine

SAUSAGES ARE sizzling on open grills; a bass beat is pumping from a nearby float. “A violent desire for happiness” reads a giant red banner. The mood in Paris is festive, despite fears that this protest might yet turn violent. Those who gathered on March 28th, for the tenth one-day national strike against the French government’s decision to raise the minimum pension age from 62 years to 64, vowed not to give up. Many of them were young.

“Yes, we are concerned about our pensions,” said Ameline, a 20-year-old law student, who was on her sixth protest. She is willing to retire two years later, but was acting out of “solidarity” with others. Joanna, aged 30, who works as a rubbish collector for the Paris town hall, had been on strike for weeks. She thinks that retirement “at 60 feels right, 64 is too much.” President Emmanuel Macron, Joanna suggested, should come down and try cleaning streets. “I would just like him to understand that the French, Parisians, are tired.”

With 740,000 demonstrators across France, turnout on March 28th was below the level five days earlier. But protests look set to continue. The next national strike has already been scheduled for April 6th. Legislation to raise the pension age may have been pushed through parliament, without a direct vote. But the Constitutional Council still needs to approve the reform. It will also rule on an opposition proposition to hold a referendum on the pension age. Its decision is due on April 14th.

"It's never too late," says Mohammed, a member of the CGT, a trade union, at the Paris protest. "Macron and the government have got to listen to the *ras-le-bol* (fed-up-ness) of the people." Anger at the president is acute. "I'm not someone who wants to burn rubbish bins," says Catherine, who belongs to the CFDT, the country's biggest trade union. "But his contempt is dramatic, and makes us mad."

Mr Macron seems determined not to back down. But he is under pressure to ease the tension. The night of March 23rd saw 903 acts of arson in Paris, as anarchists, known as *black blocs*, joined in. Bins overflowing with stinking rubbish were torched. In Bordeaux rioters set the town-hall door alight. Across France, 457 people were arrested and 441 law officers injured, as well as uncounted numbers of protesters. The French police were accused of using excessive force.

Elisabeth Borne, the prime minister, has agreed to talk to trade union leaders next week. It is hard, though, to see what they could agree on. Laurent Berger, head of the CFDT, wants to put the pension reform "on pause", an idea the government rejects. His relationship with Mr Macron, which started well in 2017, has soured. "It's nothing personal," Mr Berger told *The Economist* at the protest march this week. "But for two and a half months there have been millions of people in the street, week after week, and his response has been: no meeting, no phone call, nothing."

The political fallout from this episode looks dark. If Mr Macron were to call fresh elections, nobody would win a majority. His centrist alliance would lose five points, getting just 22% of the first-round vote. The party set to benefit the most, with a seven-point gain to 26%, is Marine Le Pen's hard-right National Rally. ■

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No good options

A surge of migrants is reaching Italy

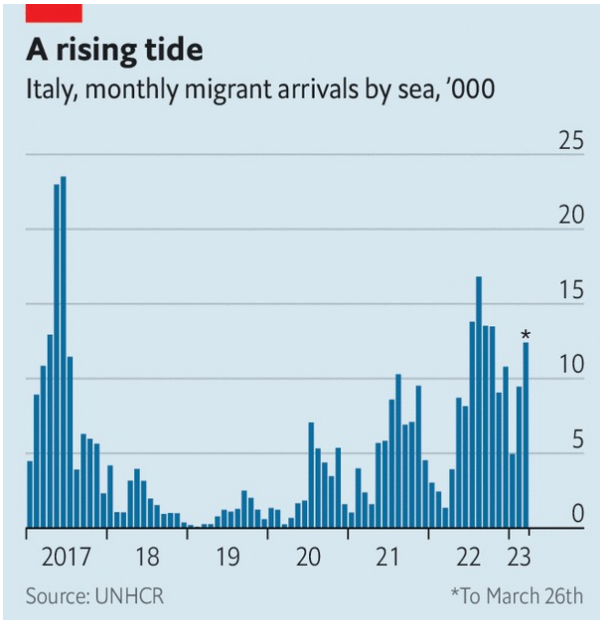
Giorgia Meloni's right-wing government is facing its first real crisis

Mar 30th 2023 | ROME



DEFYING ADVERSE late-winter weather, migrants fleeing poverty and persecution are reaching Italy's shores in unprecedented numbers. By March 27th 26,927 had arrived so far this year. This compares with 6,543 at the same point last year, when the annual total was over 105,000. In 2017, the peak year so far, the corresponding numbers were 24,280 and more than 180,000. That suggests that depending on which pattern this year follows, Italy could face an influx of 200,000 seaborne migrants, possibly even 400,000 or more.

That is a nightmare for a coalition that came to power last September promising to clamp down on irregular immigration. Giorgia Meloni, Italy's prime minister, is not the only European leader affected. Many or most of the migrants who land in Italy move on to countries farther north where their compatriots are already settled, where jobs are more plentiful and public benefits are more generous.



The Economist

Arrivals are one aspect of this drama. Non-arrivals are a much grimmer one. In just four days to March 26th, seven boats carrying migrants foundered off the North African coast, leaving more than 100 people dead or missing. Given the lack of seaworthiness of most of the vessels into which the migrants are packed, tragedies are inevitable. But the Italian government has increased the risks by imposing restrictions on the ships run by NGOs that rescue migrants and bring them to Italian ports. The government and its supporters regard the NGOs as the operators of a ferry service for uninvited guests.

Ms Meloni's government has not so far attempted to impose the blockade of North Africa's coastline that her party, the Brothers of Italy, once rashly promised. And it backed down from its efforts to send the NGO vessels elsewhere, in the face of the outraged reaction of France. But the government has obliged the ships to dock at ports in the north of Italy, thereby reducing the time they can spend looking for migrants in distress. And it has told their skippers they must head for land as soon as they carry out a rescue, even if other migrants are in distress nearby. On March 25th, the authorities impounded the MV *Louise Michel*, purchased by the British artist Banksy, and ordered its crew not to put to sea for 20 days. It had rescued 180 people in four operations before delivering them to the Italian island of Lampedusa.

Though migrants continue to arrive from Libya and Turkey, the key to the recent surge is an increase in the numbers leaving from troubled Tunisia. President Kais Saied last year shut down parliament and awarded himself wide-ranging powers. Unemployment is at more than 15% and the country is short of food. A deal with the IMF for a $1.9bn loan is stalled, apparently because of the president’s reluctance to countenance economic reforms. In an apparent effort to shift the blame for his country’s difficulties, Mr Saied in February ordered the security forces to expel illegal residents, declaring that migration from sub-Saharan Africa was the result of a plot aimed at changing his country’s ethnic composition.

On March 27th the EU’s commissioner for economic affairs, Paolo Gentiloni, held talks in Tunis with Mr Saied and others. Mr Gentiloni held out a promise of additional European financial support—but only once Tunisia had agreed to the IMF plan and all its conditions. That seems to be a very big but. ■

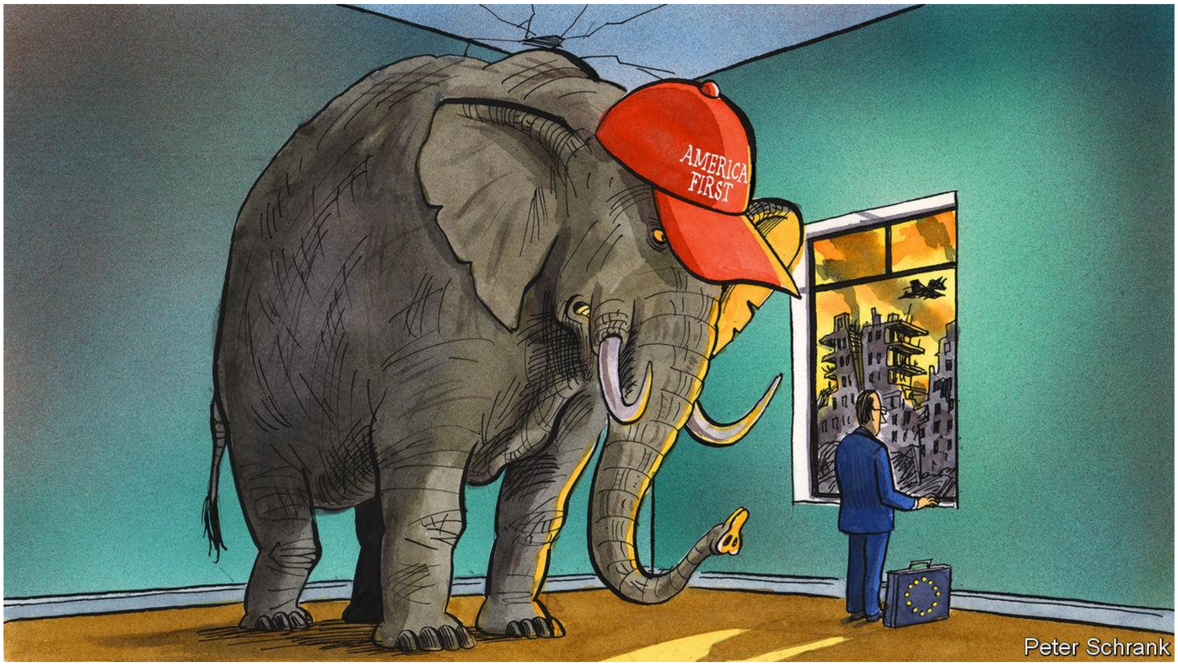
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Charlemagne

Europe is unprepared for what might come next in America

A Trumpian revival would leave Europe exposed

Mar 30th 2023



THE WEST'S TWO biggest democracies head to the polls in 2024: the EU will vote to refresh its 705-seat parliament in the spring, before America picks a new president and Congress in November. One of these ballots will be enormously consequential for Europe, potentially reshaping its entire political landscape. The other will elect Members of the European Parliament.

A spectre is haunting Europe—the spectre of Trumpism rebooted. The nativist leanings of a president with little regard for diplomatic mores caused plenty of heartache the first time around. That was before war broke out on the continent. Now the prospect of a revival—either with Donald Trump himself, or a variant like Ron DeSantis, the governor of Florida who is his most serious challenger for the Republican nomination—is setting nerves jangling. Everyone knows trouble may be coming. Nobody can agree on

what to do about it. Like a deer caught in the headlights, Europe is stuck, waiting to see what happens.

The continent's leaders and voters were relieved in November 2020 when Joe Biden returned the Democrats to the Oval Office. Unlike President Trump, he has not called the EU a "foe" nor idly questioned the point of NATO. He holds reassuringly boring views about climate change (ie, that it is happening). As American presidents not called Trump are wont to do, he listens to the Washington foreign-policy elite that European diplomats have schmoozed for decades. President Biden's secretary of state, Antony Blinken, speaks impeccable French, an indication of moral deviance in Trumpian circles. The incumbent commander-in-chief rarely fails to talk up his Irish heritage. Even so, the current relationship between Europe and America is not always smooth: witness the ructions over Mr Biden's green tax breaks, which Europe frets come with protectionist strings attached.

The most obvious concern, should America decide to strive for Trumpian greatness again, is Ukraine. In an ideal world, Russian troops would be defeated before the next presidential term starts in January 2025. Yet the mere chance of an unpredictable leader in the White House could be enough to encourage Vladimir Putin to tough out his botched invasion until then. For it is American weapons and intelligence that have kept Ukraine in the war above all else, including European aid. Trying to guess what a re-elected President Trump would do is a mug's game; he has said he could end the war "within one day" by cutting a deal with Mr Putin (details to follow). Mr DeSantis recently termed the war a mere "territorial dispute" between Russia and Ukraine and said it was not in America's interest to become entangled (though he reversed himself after facing a storm of criticism). Either way, Europe would have no choice but to accept Washington's decision.

If anything, Europe's dependence on America has deepened under Joe Biden. A year ago Constanze Stelzenmüller of Brookings, a think-tank in Washington, noted that Germany had "outsourced its security to the United States, its energy needs to Russia and its export-led growth to China." In Europe today, says Jeremy Shapiro of the European Council on Foreign Relations, another think-tank, all three facets are increasingly in American hands. NATO remains the guardian of European security, not least since armouries from Estonia to Portugal have been emptied to bolster Ukraine.

Much of the gas that used to come to Europe through Russian pipelines is now supplied from ships full of fracked American LNG. And green subsidies have turned America, not China, into the El Dorado for European companies.

What do you do when the guarantor of your security is of dubious reliability? France, having never quite trusted America with defending its interests, has decades of experience at this game. President Emmanuel Macron pleads to all those who might listen that the EU needs to develop its own "strategic autonomy" (again: details to follow). During the Trump years he spoke of Europe being on the edge of a precipice, and NATO approaching brain death. To those with this updated Gaullist mindset things have scarcely improved under President Biden. Witness the hasty departure from Afghanistan that blindsided Europe in August 2021, or the abrupt manner Australia was flipped away from a large French submarines contract a month later.

But French solutions to the problem of an unsteady America fall largely on deaf ears. Central Europeans in particular do not trust anyone but America with their security, least of all France or Germany. Poles and others suspect Mr Macron is pushing his own agenda, perhaps to fill French defence contractors' order books. Right now, Europe is united over Ukraine because its various leaders are broadly on the same page as Mr Biden. If America changes tack, expect parts of Europe—but not others—to follow suit.

Biden its time

Even a divided Europe may have a few diplomatic cards to play, no matter who sits in the White House. A Republican administration will be as hawkish on China as President Biden, if not more so. But for America to isolate its rival requires the help of Europe, which is looking merely to reduce its dependency on China, not throttle it. So far the EU is content to keep doing business there: Mr Macron will visit Xi Jinping in Beijing next week, along with the European Commission's boss, Ursula von der Leyen. Europe's role as balancing power could give it some sway over American thinking.

But not much, probably. The real problem will be at home. Ever since Barack Obama announced a "pivot to Asia" over a decade ago, Europe has known it needs to spend more on its own security. Belatedly, Germany and others have promised to do so. Yet nobody thinks this will make a difference by the end (let alone the start) of the next American presidential term. So Europe will be, again, vulnerable to the whims of a superpower for which European interests are an afterthought. The continent will go into 2024 hoping for the best: it lacks the means to prepare for anything else.■

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Britain

- Under Humza Yousaf the forces that polarised Scotland are weakening
- Can London stop deaths and serious accidents on its roads?
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Slowing the centrifuge

Under Humza Yousaf the forces that polarised Scotland are weakening

He will struggle to replicate the momentum Nicola Sturgeon brought to separatism

Mar 30th 2023

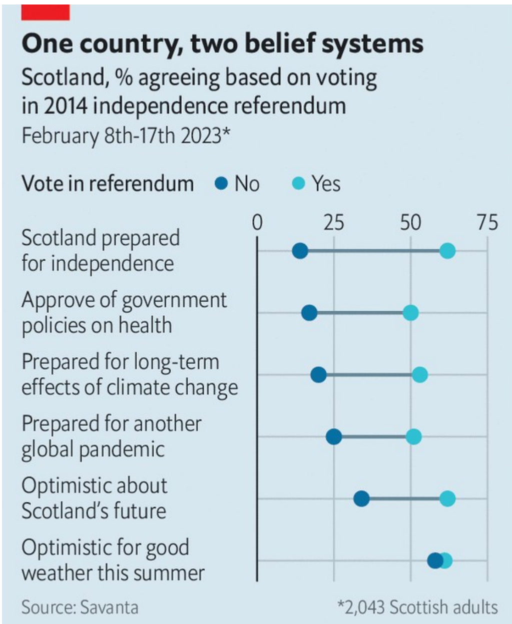


WHEREAS THE chamber of the House of Commons comprises tiers of opposing benches, set two swords' length apart, the Scottish Parliament in Edinburgh takes the form of a hemicycle. The seating reflected a hope that the assembly, which was formed at the turn of the millennium, would bring a more consensual, more European form of politics to Scotland.

That hope is unfulfilled. The independence referendum of 2014, and the years of confrontation between the Scottish government and the British government in Westminster that followed, have acted as a centrifuge, flinging the Scottish electorate into opposing poles. The constitution is the main dividing line of Scottish politics.

That split drives party choice at elections. Some 90% of Scottish National Party (SNP) supporters say they would back independence in another

referendum tomorrow; 96% of Tory voters would oppose it. It predicts how Scots see much else, too, suggests polling by Savanta for *The Economist* that was conducted at around the time of Nicola Sturgeon's resignation as SNP leader in mid-February.



The Economist

It shapes how they see the Scottish government: pro-independence voters are by a wide margin more approving of its handling of a range of domestic policies, and more likely to think it good at communicating, economic management and international relations. It also shapes how they think about the country's prospects (see chart): they are much more likely than unionists to say Scotland is prepared for another global pandemic or for the effects of climate change. On only one question do the two groups see things similarly: the weather in Scotland this summer.

The election of Humza Yousaf, who became Scotland's new first minister on March 29th after winning a ballot of SNP members, may mark a turning-point. Since 2014, and particularly since the Brexit referendum of 2016, Ms Sturgeon kept the nationalist movement on high alert. In her tenure she announced a succession of deadlines for a second referendum; no sooner would one be passed than a new one declared. Yet the idea that break-up is coming is suddenly much harder to sustain. The centrifuge is slowing.

To understand why, start with Mr Yousaf himself. Although he was Ms Sturgeon's favoured candidate, he inherited little of her authority and lacks her charisma. He secured a slim majority in a shrinking party, winning 52% of the ballot after two rounds of voting among the SNP's 72,000 members (down from 125,000 four years ago). That in part reflects dissatisfaction with the drift in public services that set in under Ms Sturgeon: posts running transport, justice and health have earned him the unkind sobriquet "Humza Useless".

Kate Forbes, his main rival, did surprisingly well given she is a socially conservative Christian running in a self-consciously progressive party. Her warning that "more of the same" would be an "acceptance of mediocrity" hit home with members. Among the public all three candidates in the race (the other was Ash Regan, a former community-safety minister) were more poorly rated than Ms Sturgeon, but Mr Yousaf ranked worst. That raises the question of how he managed to win at all; one answer is that when constitutional concerns dominate, the normal feedback loops that weed out less popular politicians get short-circuited.

Mr Yousaf's lack of clout will be felt. When Ms Sturgeon lobbied successive British prime ministers for a second referendum, she did so with the conceit that she spoke for all of Scotland. Mr Yousaf will struggle to claim he speaks for all the SNP. The contest widened deep rifts on taxation (he promises to raise it), social policy (he backs gender-recognition reforms) and the party's administration (Peter Murrell, the party's chief executive and Ms Sturgeon's husband, resigned in a row over those falling membership figures). On March 28th Ms Forbes rejected the post of rural-affairs secretary in Mr Yousaf's cabinet—a demotion—and returned to the backbenches.

As a result Mr Yousaf must lean more heavily on the one thing that does unite the party: a redoubled pursuit of independence. Yet the SNP does not have a credible plan to circumvent the veto that the British government possesses over a new referendum, and which left Ms Sturgeon's government roadblocked. Mr Yousaf finds himself trapped between the monomania of his party and what he knows to be electoral reality. In the campaign he correctly observed that a road to independence required a "sustained majority" in its favour which did not yet exist. Yet his first acts in office

have been to declare that the “grassroots, civic-led” campaign for divorce would be sent into “fifth gear” and to press Rishi Sunak for a plebiscite.

It is not clear how long hard-core activists will put up with the pantomime of their leaders being rebuffed by Downing Street. The monopoly the SNP once enjoyed over independence strategy is weakening as rival fringe groups jostle to take the lead. Alex Salmond, a former leader of the SNP who fell out with Ms Sturgeon and her acolytes and is intent on revenge, is watching carefully.

The SNP’s predicament is a mixed blessing for the Conservative Party. Alister Jack, the Scotland secretary in Westminster, has offered a “reset” and joint working on common projects such as industrial sites. Those who advocated a hard line on denying the SNP a second referendum look vindicated; claims that doing so would boost separatism did not come true. But a weakened SNP is also a headache: the Tories have reaped the rewards of polarisation in Scotland by positioning themselves as the surest guardian of the union.

The bigger beneficiary by far is the Labour Party, whose voters straddle the constitutional divide. The paradox of Scotland’s polarisation is that although the constitution drives voters’ political allegiance, it is not their priority: both unionists and nationalists rank the health-care system and the economy as more pressing. The SNP’s success lay in marrying those concerns to the cause of independence.

The strategy of Sir Keir Starmer, the Labour leader, is to convince SNP supporters that electing a Labour government to Westminster is a faster and more reliable vehicle for getting rid of the Tories and delivering social change than a referendum that never seems to come. In public, the party’s tone towards disaffected nationalists is humble. In private, it sees the best chance in a decade of drawing a polarised Scottish electorate back to the centre. ■

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Accident zone

Can London stop deaths and serious accidents on its roads?

The city’s “Vision Zero” programme identifies its most dangerous junction

Mar 30th 2023



OFFICIAL FIGURES show that 101 people were killed in road accidents on the streets of London last year. The mayor, Sadiq Khan, wants to reduce the number of deaths and serious injuries on the capital’s roads to zero by the curiously specific date of 2041. He is a believer in “Vision Zero”, an initiative to eliminate road deaths that started in Sweden.

Nought is an implausible target. But it focuses minds on an extremely important question: what reduces collisions in a big city? Transport for London (TfL), the capital’s road and rail authority, puts its answers into five categories so broad they verge on the insipid: safe speeds, safe vehicles, and so on. But there is real value in the detail. A safety standard for Heavy Goods Vehicles (HGVs), which harnesses blind-spot cameras and close-proximity sensors, is pioneering. The European Commission has followed it.

TfL has also helpfully identified London's most lethal places. Half of Britain's most dangerous roads run through the capital. Research in 2021 found that the A1010, which stretches from Tottenham to Waltham Cross in the north of the city, sees the most accidents per vehicle-miles driven of any in the country. Around three-quarters of collisions that cause death or serious injury happen at junctions; the Holborn gyratory, near the British Museum, has been the site of the most deaths since 2012. Westminster is the most dangerous borough for pedestrians and cyclists: it introduced 20mph speed limits on all its roads in 2021.

"Vision Zero" was launched in 2018. Deaths and serious injuries on London's roads have fallen—by 53% and 40% respectively in 2022 compared with a 2005-09 baseline. But movement is not one-way. Fatalities were record-breakingly low in 2020 and 2021, when lockdowns kept people at home. But in 2022 the death toll rose again. "We are moving in the right direction", says Will Norman, London's walking and cycling commissioner, "but sometimes we are running to stand still."

Bureaucratic obstacles, and a funding crisis for TfL brought about by the pandemic, have impeded work to improve the riskiest spots. Only a few parts of the A1010 have bike lanes with barriers. TfL has improved 43 of London's most dangerous junctions, but Camden council did not adopt a plan to change the Holborn gyratory until the end of 2022.

Mr Khan's embrace of "Vision Zero" is driven in part by another 2041 target—for 80% of journeys in the capital by then to be made by walking, cycling or taking public transport. Safety is the biggest barrier to people taking up cycling or letting their children walk or cycle. But greener vehicles may be unsafe themselves. E-scooters, suggests Mr Norman, are the latest thing to flummox planners. "One of those doing 50mph down the A12 is not good for anybody."■

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Nanny state

What child-care reforms say about Britain’s welfare state

It is a hybrid of liberal and social-democratic thinking

Mar 30th 2023



BRITAIN’S FIRST attempt at providing universal child care fell victim to the baby boomers. The 1944 Education Act, part of the construction of Britain’s post-war welfare state, instructed local authorities to make provision for nursery places for the under-fives as well as schools for older children. The post-war surge in the birth rate, however, meant there were just far too many nippers for Britain’s cash-strapped government to fund these places and expand secondary schools. Priority was given to the older children and early-years education fell by the wayside.

In the budget on March 15th Jeremy Hunt, the chancellor of the exchequer, completed the job of making good on this omission. In England working parents of children between the ages of nine months to two years old will, from 2025, get government funding for up to 30 hours of child care. That builds on an existing scheme for those between the ages of three and four.

The reforms both expand the welfare state and exemplify a peculiarly British way of thinking about it.

In 1990 Gøsta Esping-Andersen, a Danish sociologist, divided the rich world's welfare states into three categories: liberal, social-democratic and conservative. Liberal welfare states prioritised market solutions and individual decision-making. The state should get involved only to prevent extreme poverty: think of America, with private insurance for health care and food stamps for the very poor. Benefits tended to be means-tested, providing a safety net for those who struggle rather than a means of escaping from the labour market altogether.

The social-democratic type, like the one in Sweden, was characterised by universal benefits and high-quality public services that cater to rich and poor alike. State-funded child care and copious public-sector jobs helped ensure that a woman's place was in the office rather than at home. Conservative welfare states, associated with the legacy of Otto von Bismarck, were more concerned with preserving traditional family values than squashing pay differences. Pensions and unemployment benefits were often based on how much you contributed and were more generous to high earners; the tax system, meanwhile, gave breaks to married couples.

No state fits perfectly into Mr Esping-Andersen's typology (which also could not account for the emerging East Asian welfare states nor for Mediterranean ones that combined a big role for families alongside minimal state social security). But it is a helpful way of thinking about Britain's particular conception of the welfare state.

Britain is typically placed in the liberal category. But from the start it would try to combine liberalism with a degree of social democracy. William Beveridge, author of the report that became the blueprint for the post-war welfare state, wrote that there would be a guaranteed minimum "of right and without means test" but also "for voluntary action by each individual to provide more than the minimum for himself and his family". That mixture helps explain why Britain has both the National Health Service and private schools for the affluent. And it also illuminates why the child-care reforms are designed as they are.

British voters seem to crave something Nordic. Polls consistently show a majority of the public favouring a combination of higher tax and spending on public services rather than the reverse. The government has spent over a decade emphasising the “grave” part of its “cradle-to-grave” welfare state—health care and pension spending have been largely protected from cuts in recent years. A tilt towards the cradle is popular with Britons.

Mr Hunt’s expansion of child care for working parents was backed by over 70% of voters for all the major parties, according to YouGov, a polling company. An annual survey of Britain’s social mores finds that attitudes towards working parents have turned Scandinavian. In 2007 around 20% disapproved of a parent (usually a mother) working full-time with a child under three; by 2019 that had fallen to 11%, the same figure as Sweden. (Only a handful of Conservative MPs lamented the idea of the state displacing the family in caring for bairns: the conservative tradition has few adherents in Britain.)

The reforms will mean a significant expansion of the welfare state, doubling the amount that the government spends on child care to £8bn ($9bn; 0.4% of GDP), creating a new and permanent political battleground over the funding and management of the scheme. Yet if the child-care reforms have social-democratic aims and implications, their design remains liberal.

The state will foot the bill and help set prices, but it is up to profit-seeking businesses to actually provide the places for children. The entitlement, too, will not go to higher earners; British parsimony has trumped Nordic universalism. Families where any parent’s wage exceeds £100,000 risk losing tens of thousands of pounds of state support for earning an additional pound in income.

“That ends up doing some weird things to work incentives,” points out Christine Farquharson of the Institute for Fiscal Studies, a think-tank. If the goal of the policy is to help get those with the heftiest child-care costs into jobs, she says, it fails: such costs are largest for high earners in London and the south-east of England. Bungs for the upper-middle classes are frowned on, however. The welfare state may be getting bigger, and taxes rising to pay for it, but it remains the same muddle of competing British instincts. ■

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National treasures

The battle to keep “Portrait of Omai” in Britain

A joint acquisition with an American museum may be the answer

Mar 30th 2023



THE YOUNG man in the picture was the first Polynesian to visit Britain. He was brought to London from the South Pacific by Captain James Cook, a British explorer, in 1774, and presented to King George III. He learned to ride and play chess, and sat for a portrait by Joshua Reynolds, the first president of the Royal Academy of Arts.

For more than 200 years after Reynolds’s death, ”Portrait of Omai” was owned by the Howard family and hung at Castle Howard in Yorkshire. But in 2001 the painting was sold to John Magnier, an Irish magnate, sparking a protracted stand-off. Mr Magnier wants to take the painting out of the country for good. The government believes it is of historic importance to Britain and has repeatedly denied him permission to do so. Yet British buyers have been unable to raise the money needed to get it back from Mr Magnier before a ban on exporting the portrait expires. A solution may now be in sight, involving the J. Paul Getty Museum in Los Angeles; it could be

a template for other treasured artworks that are too expensive for the nation to buy.

More than 150 countries impose export restrictions on their cultural treasures. America is an outlier, curbing only the sale of works by American artists that are owned by the federal government. Japan has a list of 906 treasures, including swords, that cannot be sold or even moved. Many European countries operate a right of pre-emption, allowing the government to step in and buy any work offered for sale.

Britain operates a hybrid system that balances the aims of keeping hold of important pieces and protecting the rights of their owners. Every year about 30,000 items are sold to buyers who want to take them abroad. Britain has no inventory of national treasures, nor does it use pre-emption rights. Instead, all works that are over 50 years old or are worth more than £65,000 ($80,000) need an export licence. Most are waved through. Older or more valuable pieces are assessed at monthly meetings of the Reviewing Committee on the Export of Works of Art and Objects of Cultural Interest, a group of curators, dealers and art historians.

These are judged by three measures known as the "Waverley criteria", after the chairman of a government committee in the early 1950s: historic significance, aesthetic importance and a work's contribution to scholarship. The most important works are kept in Britain under a temporary bar while domestic institutions try to raise the funds to buy them. In 2020, for example, the National Maritime Museum in Greenwich used this system to buy a sledge that Ernest Shackleton had used on one of his expeditions to Antarctica. An anti-slavery poem handwritten in ancient Greek by Samuel Taylor Coleridge is subject to an export ban; would-be British buyers have until mid-May to raise £20,400 to buy it.

This system is being tested as never before by rising art prices. Mr Magnier paid £10.3m for "Portrait of Omai". Now he wants £50m for it (a fair value, according to Anthony Mould, an independent dealer). The National Portrait Gallery (NPG) in London has been trying to raise the cash, but by the time the export ban on the picture was last extended, in March, only half the money had been raised. Another extension is unlikely, so the NPG has until June 10th to find the money.

The NPG's answer is to acquire the painting jointly with the Getty, and in all probability for it to spend half its time in London and the other half in California. That sort of agreement is unprecedented in Britain, but in 2015 a similar arrangement was agreed between France and the Netherlands to share ownership of a pair of important portraits by Rembrandt.

The Waverley criteria were meant to keep Britain's cultural treasures at home so that people could see them whenever they wanted. But safeguarding an artwork for the nation some of the time may increasingly be all that can be achieved. The NPG will not see its efforts as a halfway house if they come off (insiders say the deal with the Getty is close to being finalised). After being closed for three years for refurbishment, the gallery hopes it will be able to throw open its doors again in triumph on June 22nd, with "Portrait of Omai" as its crowning glory. ■

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Neighbourhood watch

Britain announces another crackdown on anti-social behaviour

Good ideas jostle with bad ones

Mar 30th 2023



PLANS TO COMBAT anti-social behaviour in Britain tend to elicit hollow laughter. Understandably so. Successive governments have introduced similar-sounding initiatives to tackle what is defined in law as behaviour "likely to cause harassment, alarm or distress", before quietly shelving them. And now there are fewer police officers around to tackle low-level crimes. The number providing the visible neighbourhood presence that might deter nuisance-makers has fallen over the past decade.

The government itself is resolutely undeterred. On March 27th Rishi Sunak, the prime minister, said that 16 areas in England and Wales would be given extra funding for one or both of two schemes. One is "hotspot" policing: the targeted deployment of more officers to specific areas. This type of policing, which has been tested in several parts of Britain (and elsewhere), has an impressive record. A study by Cambridge University in 2019 found that a heightened police presence in crime hotspots on the London Underground at

certain times of day reduced crime throughout the Tube network by 14% compared with the previous six months.

The other scheme is an “immediate justice” programme whereby vandals, dressed in high-visibility vests “or jumpsuits”, would be made to repair the damage they have done, sometimes within 48 hours. They might also be made to wash police cars. The hope, presumably, is that the prospect of humiliation will be a disincentive to misbehave. The government’s plan also includes increasing fines for fly-tipping and graffiti-scrawling and making it easier for landlords to evict unruly tenants.

When serious crimes like rape often go unpunished, critics ask why the government is launching a push against anti-social behaviour. The data suggest it is falling, after all. The police recorded 1.1m incidents in the year to September 2022, compared with 3.5m in 2009-10.

But that may be partly because police have recategorised some episodes as public-disorder offences. Self-reported incidents have risen in that time. And Lawrence Sherman, a professor of criminology at Cambridge University who is the first chief scientific officer of the Metropolitan Police, points out that incident logs may not be the best way to measure anti-social behaviour. By the time police turn up the miscreants have often disappeared, so incidents are not logged. Counting the calls that report anti-social behaviour would be better, he says, both to identify hotspots and to tell how well policing is working.

For people who live in areas with high levels of anti-social behaviour, it is a blight. Some, especially old people, say it prevents them from going out as often as they would like. Anti-social behaviour can lead to more serious criminality (and to prison, a particularly harmful place for young people). Political considerations also play a part. In February the Labour Party pledged its own crackdown.

Politics may explain the more scattergun aspects to the government’s plan. Stopping nuisance begging beside cashpoints seems sensible; in shop doorways less so. The plan to class nitrous oxide, a mild stimulant known as laughing gas, as a category C drug (thus criminalising its users) contradicts a recent report by the government’s own Advisory Council on the Misuse of

Drugs. The anti-social behaviour that the government attributes to its use seems to consist of the littering of canisters, which are smaller than beer cans, and "loitering" by youngsters in parks, which is hardly the stuff of nightmares.

Organisations that work with young people point out that austerity brought brutal cuts to youth services in areas where they are needed most. "We know young people need hope and opportunity," says Campbell Robb, the chief executive of Nacro, which works to prevent offending. The government has said its push will include extra funding for youth clubs. Achieving a balance between that and the harsher elements of a crackdown will be key. ■

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The great train robbery

Britain is still marked by the mistakes of the Beeching Report

60 years have passed since the railways were reshaped

Mar 24th 2023 | Carno, Wales



TO UNDERSTAND BRITAIN'S relationship with its railways you can read learned reports and lengthy histories. But it is better to read "Thomas the Tank Engine". The stories are set on the fictional island of Sodor—more or less Eden, for engines. There are cotton-wool clouds, lambs in the fields and an intermittently irascible deity (the Fat Controller). But as in Eden, shadows lurk. A steady stream of refugee engines arrive, bringing tales of the world beyond. There, they warn, stations are being closed and branch lines severed. One engine despairs at "the Dreadful State of the World".

Such horrors do happen. On March 27th 1963 a businessman-turned-bureaucrat published a boring-sounding report. It was called "The Reshaping of British Railways" and the author was Richard Beeching. The report had such chapter headings as "Stopping-Train Services" and "Present Method of Handling Freight Traffic". In cool prose it explained how Britain's future methods of handling freight and people would be different: 2,363 stations

would be closed and 5,000 miles (8,047km) of track removed from the passenger network. The railways would be reshaped “to make them pay”.

Rarely has a civil servant provoked such outrage. Thousands protested; newspapers lamented. To this day, for Britons of a certain age, he remains a bogeyman. The report metamorphosed into a variety of bloody metaphors: it was the “Beeching Axe” or the Beeching “scalpel”, and its consequences were “death”.

The Beeching report crept into everything from poetry (John Betjeman wrote a bad poem about it) to song and television—in the 1990s the BBC produced a short-lived comedy series called “Oh, Doctor Beeching!”. What the cuts removed was not merely steel and sleepers but an ideal. Until Beeching the country could still see itself as a place of quaint stations and polite porters and 4.50s from Paddington, an English sort of Eden. After, it could not. Beeching was not frugality: it was the Fall.

In truth, Britain’s railways had been in a bad way long before Beeching wielded his axe. In the 19th century railways had unspooled across Britain with Victorian vim and an equally Victorian absence of central planning. One train line to Canterbury finished six miles shy of the city centre because that was where the money ran out. The arrival of the motor car siphoned passengers away from the trains: by 1929 some stations already had less than 10% of their pre-1914 traffic. Government pricing obligations condemned rail to uncompetitive rates; heavy use of the trains in the second world war wore the infrastructure out.

By the 1960s the railways were in a sorry state. Poets such as Edward Thomas might immortalise Adlestrop, where the only sounds on the “bare platform” were the hiss of steam and the blackbirds. Accountants, however, wished for more noise. The railways were losing over £100m (£1.7bn, or $2.1bn, in today’s money) a year in 1962. Adlestrop was one of the stations listed for the Beeching Axe.

In the years since the report was published and the cuts enacted, anger has been replaced by analysis. It is now known that one of Beeching’s biggest errors was a breezy assumption that cuts would not cause decline but merely reflect it. A study in 2022 by Stephen Gibbons at the London School of

Economics (LSE) and his co-authors found that places most exposed to the cuts saw far slower population growth than places that were least affected.

Although Beeching had correctly diagnosed Britain's problem—that its circulatory system was struggling—his cure was ill-conceived, says Terence Gourvish, an associate professor at the LSE. "The whole body was ailing" so "chopping off the fingers" didn't help. Axing stations was not only ineffective (since it saved little money) but its results were irksome. Today it is all but impossible to traverse swathes of Britain without describing a "V" shape via London, since so many east-west lines went as a result of Beeching.

In the village of Carno in Wales (population: 736) the locals are in little doubt about Beeching. Carno sits on the Cambrian Line, a string of small stations that run across the hills of Powys. The arrival of the train in 1863 was revolutionary. A noticeboard in a nearby village divides its history into two eras: the Romans and the railways. Bernard Evans recalls travelling to school on the line as a boy. "We were thinking we were going into the modern world."

Then, in 1963, the modern world retreated. Carno appeared in the mournful lists of stations that ended the Beeching report—like names on a war memorial, as Charles Loft, a writer, puts it. It closed in 1965. Trains still rumble past but they no longer stop. Now, saplings grow on the platform. Mr Evans wishes the trains still ran. And when asked about the long-dead Beeching, his reply is simple: "Shoot the bugger." ■

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Drip, drop, tick, tock

Fixing Britain’s national water supply will be a marathon

But there’s no time to waste

Mar 30th 2023



THE TOWN of Havant, explains Bob Taylor, was founded on Europe’s largest natural field of springs, which is fed by rainwater falling on the South Downs and percolating into a chalk aquifer. Much of the water goes out to sea. But in three years it will start to fill a reservoir.

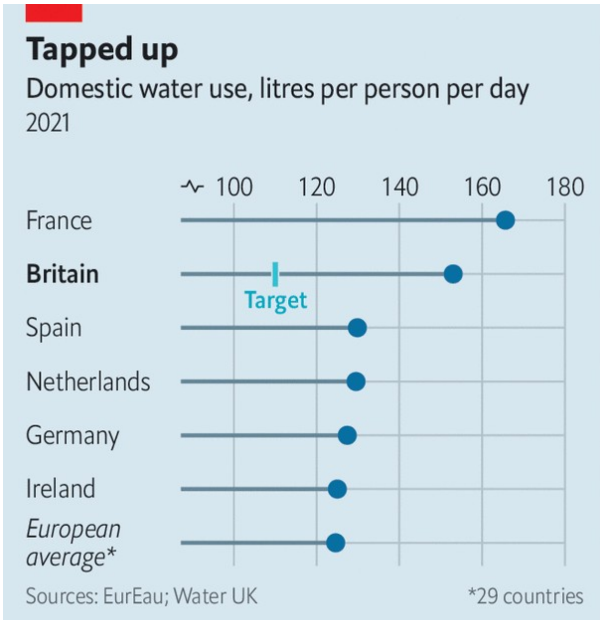
Due to open in 2029, Havant Thicket reservoir—a collaboration between Portsmouth Water, where Mr Taylor is chief executive, and neighbouring Southern Water—will be Britain’s first since the early 1990s. Others are on drawing boards elsewhere, along with schemes to transfer water between rivers, via canals and long-distance pipes, and to recycle treated wastewater. Water companies in England and Wales (Scotland and Northern Ireland have their own, publicly owned companies) also plan to cut leaks by half and demand by more than a fifth. Supplies should be resilient to extreme drought by 2050.

After 2022's searing summer, the driest for 27 years, mid-century seems worryingly far away. Despite Britain's damp reputation, climate change portends more scorchers, especially in south-east England. It also threatens more heavy rains, which can overwhelm sewers and storage rather than replenish stocks, treating Britons to the stomach-turning spectacle of sewage pouring into rivers and the sea. A rising population will add to demand.

Meanwhile the Environment Agency, a regulator, wants less water taken from overused sources, forcing suppliers to find alternatives. Almost all the water from Havant Thicket will go to Southern Water, which must cut its abstractions from environmentally sensitive rivers. (Southern, which is financing the reservoir, also hopes to send recycled wastewater to it, from a nearby works.)

The Climate Change Committee (CCC), which advises the government, said on March 29th that the country was "strikingly unprepared" for the effects of a warming planet. Turning to water supply, the CCC added a little less gloomily that plans for reducing leaks and demand, at least, were "credible", and noted progress in planning new sources.

The overall scheme is in essence one drawn up by the National Infrastructure Commission (NIC), another advisory body, in 2018. The plan is to add capacity of 4,000 megalitres a day (Ml/d) by 2050, over a quarter of current typical availability. The NIC reckoned that would provide resilience up to an extreme drought—ie, one with just a one-in-17 chance by 2050.



The Economist

Those 4,000Ml/d are expected to come in roughly equal parts from cutting demand, reducing leaks and new infrastructure. Demand ought to be easiest. At 145 litres each per day—35 litres above the long-term target—Britons use more than many other Europeans (see chart). But as the NIC noted in a report on March 27th, little has changed in the past decade.

Many households have no incentive to cut back. Just over 60% have water meters (others' bills are based on outdated property values), but only 3% have the "smartest" type, giving them the most frequent, granular data. Ofwat, the industry's economic regulator, has held price rises below inflation; in 2023-24 the average annual water and sewage bill will be £448 ($550). The government has balked at making meters compulsory outside "stressed" areas.

Suppliers have meanwhile been exhorting customers to check for "leaky loos", from which 400 litres a year can drain away, and other hidden seepage. Nevil Muncaster, strategic resources director at Thames Water, says leakage from customers' pipes account for a third of his company's total.

Persuasion might be easier if companies' own pipes were less leaky. The NIC's report applauds recent improvements—leakage is down by 11% since 2019—but adds that companies' combined plans fall short of the 2050

target. New detection techniques, says Mr Muncaster, include advanced listening devices that compare what they hear to online libraries of more than 1m sounds.

Building new infrastructure will be demanding practically, financially and politically. Recent organisational changes should help. In 2019 the industry's three regulators (Ofwat, the Environment Agency and the Drinking Water Inspectorate) formed a joint unit, RAPID, to oversee "strategic" projects. And the companies are making plans in five regional groups. Some projects, including a pipe to carry water from Britain's longest river, the Severn, to the second-longest, the Thames, pencilled in for 2050, also cross regional boundaries.

Big projects are costly. In 2019 Ofwat allowed for companies to spend £469m just on initial assessments of capacity projects when it set their prices for 2020-25 (work on the next review, covering 2025-30, is well under way). Companies will have to put schemes costing more than £200m out to tender. For the biggest, there may be separate regulated companies.

New reservoirs are sure to be unpopular with those whose land and peace are threatened by lorries and bulldozers. Environmental objections are also certain. Near Abingdon, in Oxfordshire, for instance, there is vocal opposition to a prospective reservoir by the Thames that is planned for around 2040. Planning for schemes deemed nationally important may be streamlined when the government publishes a long-awaited "national policy statement" on water infrastructure which will, in effect, shift decisions from local councils to ministers. But locals will still have to be listened to.

There is a big job to be done, a multi-decade task involving continual argument and reassessment. It has barely begun, and it might have been started sooner—for which the government, regulators and the industry share the blame. Better late than never. But late all the same. ■

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International

- **[Which will grow faster: India or Indonesia?]**

Asia's greatest race

Which will grow faster: India or Indonesia?

Both countries are pioneering new ways to get rich in a troubled world

Mar 29th 2023

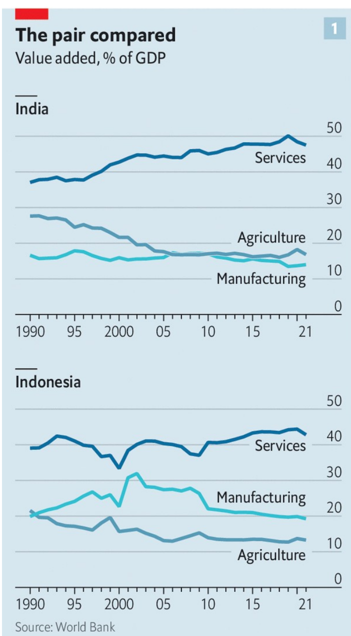


IF YOU ARE looking for growth opportunities among the world's 20 biggest economies, two stand out: India and Indonesia. The Asian giants, with a combined population of 1.7bn, are forecast by the IMF to be the two fastest-growing top-20 economies in 2023, and over the next five years. Both are pioneering strategies for getting richer in an era of de-globalisation, fraught geopolitics, automation and energy shifts, even as they seek a political formula that wins elections and avoids social unrest. Whether they succeed matters not just for their people and the investors betting many billions of dollars on them. It will also set an example for scores of other countries searching for new and reliable ways to develop in the 2020s and beyond.

For decades developing countries have followed a trusted formula for growing wealthier. Move workers from fields to more productive manufacturing jobs in cities, have them make goods for export, and watch the rapid formalisation of the economy. It worked in South Korea and

Taiwan. In China it saw 800m people escape poverty. But today this scheme no longer works well. Many countries are rowdy democracies, not authoritarian states (as South Korea and Taiwan were when they industrialised). Protectionism challenges export-led growth. Factories use more robots.

At first glance, India and Indonesia have much in common. Both are led by charismatic leaders first elected in 2014, and both will hold elections next year. Narendra Modi, India's prime minister, and Joko Widodo (widely known as Jokowi), Indonesia's president, cut their teeth in local politics and have a reputation for getting things done. They run vast (India has 1.4bn people and Indonesia 280m) and relatively young countries with myriad ethnicities and languages.



The Economist

Both places have grown quickly: India's GDP has expanded by 71% over the past decade, and Indonesia's by 52%. Services, not manufacturing, dominate output (see chart). Both are fairly open, with trade at around 40% of GDP and annual inflows of foreign direct investment worth some 1.5% of GDP. Both are largely informal: 90% of India's workers and 60% of Indonesia's toil in the grey economy. The state is small by rich-world standards: public spending comes to just 30% of GDP in India and 18% in Indonesia.

Both countries are in the midst of ambitious infrastructure build-outs. Indonesia has built 18 ports, 21 airports and 1,700km of toll roads since Jokowi took office. India is adding 10,000km of highway each year. Yet there is still a huge amount of economic catch-up to exploit. Indonesia's gross national income per person is $4,180 and India's is about half that: both are "lower middle-income" economies.

That is where the similarities end. To illuminate this we considered four areas in each country: the leading export sector; industrial policy; their geopolitical stance; and their strategy for pleasing voters. Start with export successes, a reflection of comparative advantage. In India the leading export sector is technology services. Thanks to its ability to crank out half a million new engineers a year, in 2021 India accounted for 15% of global IT services spending. Indonesia's advantage lies in commodities, some of which, such as nickel, are in global demand owing to the energy transition. By 2030 Indonesia will be the world's fourth-largest producer of the "green commodities" used in batteries and grids.

These industries generate chunky foreign earnings. In 2021 tech services made up about 17% of India's exports by value, and commodities (excluding fuel) accounted for 22% of Indonesia's. But these sectors generate few jobs: even India's IT industry has only 5m workers.



Both governments want to supercharge the private sector through industrial policy. India has a more auspicious starting-point (see chart two). The MSCI India index, which covers about 85% of the market, is worth some $830bn, about 24% of GDP. The Indonesia Index is worth just $123bn, or 10% of GDP. India has 108 "unicorn" businesses (ie, valued at over $1bn), more than any other country except America and China. Indonesia has produced fewer than a dozen. Mr Modi is betting on $30bn of "production-linked incentives" to catalyse investment in 14 priority industries, including semiconductors. His pledge to achieve "net-zero" emissions of greenhouse gases by 2070 involves building solar farms, producing batteries and much more. Beyond greenery, the idea is to create jobs and cut the cost of power. India's energy-import bill is expected to drop from 4% of GDP in 2021 to 2.5% in 2032.

The Indonesian government's flagship industrial policy, "downstreaming", is focused on natural resources. It uses sticks more than carrots. It hopes that by banning exports of selected raw materials, it will push multinationals to build refineries locally. Exports of raw nickel, for example, were prohibited in 2014. The number of nickel smelters has grown from two before the ban, to 13 in 2020 and as many as 30 by the end of this year. A ban on bauxite exports will soon take effect. Plans are afoot to shimmy higher up the value chain. Indonesia aims to make electric-car batteries with a total capacity of 140GWh in 2030—almost as much as global production in 2020. Last year Hyundai, a carmaker, started building electric cars in Indonesia.

A cruel, cruel world

As Sino-American tensions build, the two countries maintain different geopolitical stances. These will affect foreign investment and trade for decades. Consistent with its long-held policy of nonalignment, Indonesia wants to balance China and the West. Its sovereign-wealth fund, launched in 2021, is expected to receive up to $3bn in investment from China, which is also one of its largest sources of foreign direct investment. The government doesn't see this as playing countries off against each other. "Indonesia puts Indonesia first," says Nadiem Makarim, a minister.

Mr Modi's India is far more wary of China. Amid deadly border clashes with its neighbour, it has joined the Quad, a strategic grouping with

America, Australia and Japan. This has implications for the economy. In 2020 India banned TikTok and dozens of other Chinese apps. Chinese tech firms, including Vivo and Xiaomi, have faced raids and investigations since. Part of Mr Modi's industrial strategy is designed to lure Western firms that are diversifying away from China. A unit of Foxconn, a Taiwanese maker of iPhones, recently received approval to build a $1bn facility in the state of Karnataka.



The Economist

Our final category concerns how the two governments keep voters happy. Both are delivering decent growth, but far too few formal jobs of the kind China and East Asian tigers managed to create. "There are a lot of unemployed youth, which is a waste of [India's] demographic dividend," says Raghuram Rajan, formerly the Indian central bank's governor.

Part of the response involves better redistribution, often using new, digitally enabled welfare states. Indonesia has an enormous cash-transfer scheme. Mr Modi's "India stack", a state-sponsored suite of digital platforms, links citizens, armed with an electronic identity, to payments and tax systems, and bank accounts. In the 2022 financial year the state handed over $76.5bn, more than 2% of GDP, through these so-called direct-benefit transfers, reaching around 900m beneficiaries.

Yet the political differences are stark. Jokowi sits atop a sprawling coalition that includes former opponents and eight of the ten parties in parliament. Part of Jokowi's "genius" has been to stem Islamist parties through inclusion, writes Kishore Mahbubani, a Singaporean former diplomat. Jokowi is barred from running again in next year's election, but his pluralist approach is fairly likely to endure.

Mr Modi has gone the opposite way, using anti-Muslim chauvinism to galvanise India. Two-thirds of India's Hindus now say being Hindu is very important to being "truly Indian", according to Pew, a research firm. Next year's elections are likely to see rising religious tensions and a further erosion of liberal norms. Last week Rahul Gandhi, the leader of the main opposition party, lost a court case and was disqualified from parliament.

Getting rich quickly

Which model will deliver the quickest growth? The countries face some common problems, such as cronyism. Jokowi is surrounded by well-connected tycoons; in India the troubles of the Adani Group, an influential conglomerate, have been national news. Arvind Subramanian, a former economic adviser to the Indian government, points out that the *zaibatsu* conglomerates in Japan and the *chaebol* in South Korea operated in tradable sectors, forcing them to compete with international rivals. But Adani and other favourites mainly service the domestic market, leaving them sheltered. This charge may also apply to Indonesian firms.

Ultimately, with its deeper private sector and capital markets India is likely to continue to grow faster. The risk lies in its politics. Both countries' models of development rely on a narrow part of the economy racing ahead; on wealth trickling down through the informal economy or welfare schemes; and on the political system being able to manage the resulting social pressures. In Indonesia the government moulds and placates public opinion; in India it sometimes incites and directs public anger. In the short term that may not matter much. In the long run, it may be a serious problem.■

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Business

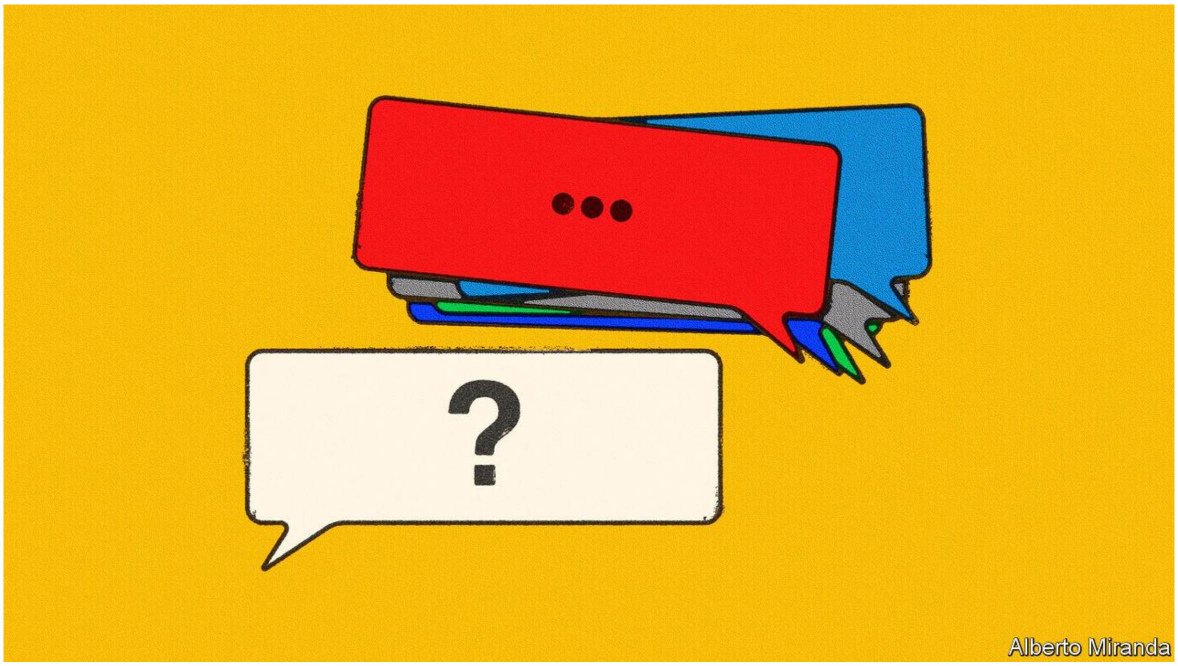
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- The market for Picassos may be about to turn
- Alibaba breaks itself up in six
- Where have all the laid-off tech workers gone?
- A zero-tolerance approach to talented jerks in the workplace is risky
- Copper is the missing ingredient of the energy transition

Mastering the machine

Big tech and the pursuit of AI dominance

The tech giants are going all in on artificial intelligence. Each is doing it its own way

Mar 26th 2023 | SAN FRANCISCO



WHAT HAS been achieved on this video call? It takes Jared Spataro just a few clicks to find out. Microsoft's head of productivity software pulls up a sidebar in Teams, a video-conferencing service. A 30-second pause ensues as an artificial-intelligence (AI) model somewhere in one of the firm's data centres analyses a recording of the meeting so far. An accurate summary of your correspondent's questions and Mr Spataro's answers then pops up. Mr Spataro can barely contain his excitement. "This is not your daddy's AI," he beams.

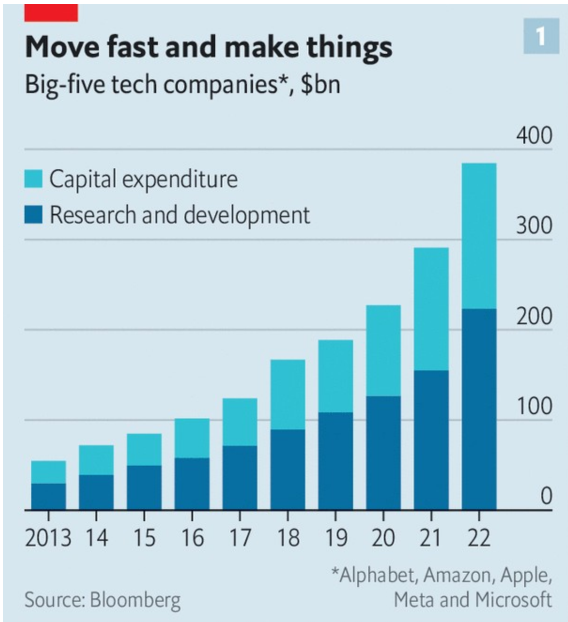
Teams is not the only product into which Microsoft is implanting machine intelligence. On March 16th the company announced that almost all its productivity software, including Word and Excel, were getting the same treatment. Days earlier, Alphabet, Google's parent company, unveiled a similar upgrade for its productivity products, such as Gmail and Sheets.

Announcements like these have come thick and fast from America's tech titans in the past month or so. OpenAI, the startup part-owned by Microsoft that created ChatGPT, a hit AI conversationalist, released GPT-4, a new super-powerful AI. Amazon Web Services (AWS), the e-commerce giant's cloud-computing arm, has said it will expand a partnership with Hugging Face, another AI startup. Apple is reportedly testing new AIs across its products, including Siri, its virtual assistant. Mark Zuckerberg, boss of Meta, said he wants to "turbocharge" his social networks with AI. Adding to its productivity tools, on March 21st Google launched its own AI chatbot to rival ChatGPT, called Bard.

The flurry of activity is the result of a new wave of AI models, which are rapidly making their way from the lab to the real world. Progress is so rapid, in fact, that on March 29th an open letter signed by more than 1,000 tech luminaries called for a six-month pause in work on models more advanced than GPT-4. Whether or not such a moratorium is put in place, big tech is taking no chances. All five giants claim to be laser-focused on AI. What that means for each in practice differs. But two things are already clear. The race for AI is heating up. And even before a winner emerges, the contest is changing the way that big tech deploys the technology.

AI is not new to tech's titans. Amazon's founder, Jeff Bezos, quizzed his teams in 2014 on how they planned to embed it into products. Two years later Sundar Pichai, Alphabet's boss, started to describe his firm as an "AI-first company". The technology underpins how Amazon sells and delivers its products, Google finds stuff on the internet, Apple imparts smarts on Siri, Microsoft helps clients manage data and Meta serves up adverts.

The new GPT-4-like "generative" AI models nevertheless seem a turning point. Their promise became clear in November with the release of ChatGPT, with its human-like ability to generate everything from travel plans to poems. What makes such AIs generative is "large language models". These analyse content on the internet and, in response to a request from a user, predict the next word, brushstroke or note in a sentence, image or tune. Many technologists believe they mark a "platform shift". AI will, on this view, become a layer of technology on top of which all manner of software can be built. Comparisons abound to the advent of the internet, the smartphone and cloud computing.



The Economist

The tech giants have all they need—data, computing power, billions of users—to thrive in the age of AI. They also recall the fate of one-time Goliaths, from Kodak to BlackBerry, that missed earlier platform shifts, only to sink into bankruptcy or irrelevance. Their response is a deluge of investments. In 2022, amid a tech-led stockmarket rout, the big five poured $223bn into research and development (R&D), up from $109bn in 2019 (see chart 1). That was on top of $161bn in capital spending, a figure that also doubled in three years. All told, this was equal to 26% of their combined sales last year, up from 16% in 2015.

Not all of this went into cutting-edge technologies; a chunk was spent on prosaic fare, such as warehouses, office buildings and data centres. But a slug of such spending always ends up in the tech firms' big bets on the future. Today, the wager of choice is AI. And the companies aren't shy about it. Mr Zuckerberg recently said AI was his firm's biggest investment category. In its next quarterly earnings report in April, Alphabet plans to reveal the size of its AI investment for the first time.

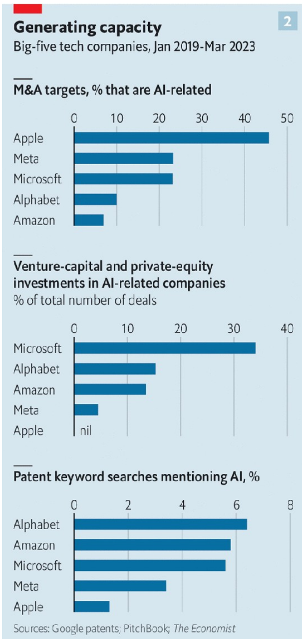
To tease out exactly how the companies are betting on AI, and how big these bets are, *The Economist* has analysed data on their investments, acquisitions, job postings, patents, research papers and employees' LinkedIn profiles. The examination reveals serious resources being put into the technology.

According to data from PitchBook, a research firm, around a fifth of the companies' combined acquisitions and investments since 2019 involved AI firms—considerably more than the share targeting cryptocurrencies, blockchains and other decentralised "Web3" endeavours (2%), or the virtual-reality metaverse (6%), two other recent tech fads. According to numbers from PredictLeads, another research firm, about a tenth of big tech's job listings require AI skills. Roughly the same share of big tech employees' LinkedIn profiles say that they work in the field.

These averages conceal big differences between the five tech giants, however. On our measures, Microsoft and Alphabet appear to be racing ahead, with Meta snapping at their heels. As interesting is where the five are deciding to focus their efforts.

Consider their equity investments, starting with those that aren't outright takeovers. In the past four years big tech has taken stakes in 200-odd firms in all. The investments in AI companies are accelerating. Since the start of 2022, the big five have together made roughly one investment a month in AI specialists, three times the rate of the preceding three years.

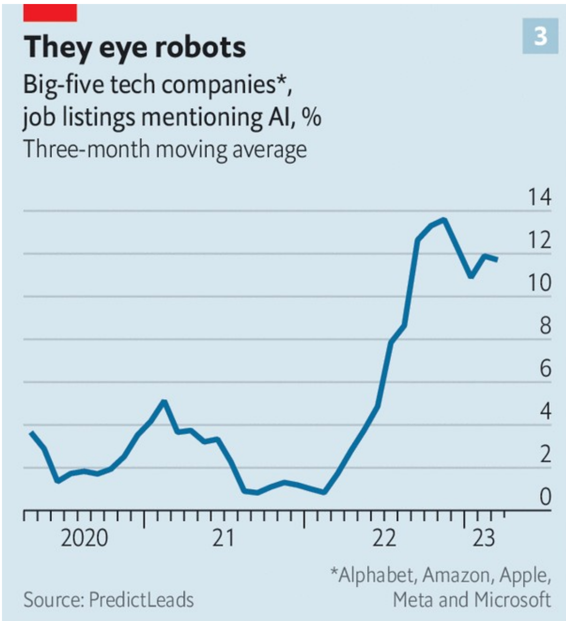
Microsoft leads the way. One in three of its deals has involved AI-related firms. That is twice the share at Amazon and Alphabet (one of whose venture-capital arms, Gradient Ventures, invests exclusively in AI startups and has backed almost 200 since 2019). It is more than six times that of Meta, and infinitely more than Apple, which has made no such investments. Microsoft's biggest bet is on OpenAI, whose technology lies behind the giant's new productivity features and powers a souped-up version of its Bing search engine. The $11bn that Microsoft has reportedly put into OpenAI would, at the startup's latest rumoured valuation of $29bn, give the software giant a stake of 38%. Microsoft's other notable investments include D-Matrix, a firm that makes AI technology for data centres, and Noble.AI, which uses algorithms to streamline lab work and other R&D projects.



The Economist

Microsoft is also a keen acquirer of whole AI startups; nearly a quarter of its acquisition targets, such as Nuance, which develops speech recognition for health care, work in the area. That is a similar share to Meta, which prefers takeovers to piecemeal investments. As with equity stakes, AI's share of Alphabet acquisitions have lagged behind Microsoft's since 2019 (see chart 2). But these, plus its equity stakes, are shoring up a formidable AI edifice, one of whose pillars is DeepMind, a London-based AI lab that Google bought in 2014. DeepMind has been behind some big advances in the field, such as AlphaFold, a system to predict the shape of proteins, a task that has stumped scientists for years and is critical to drug discovery.

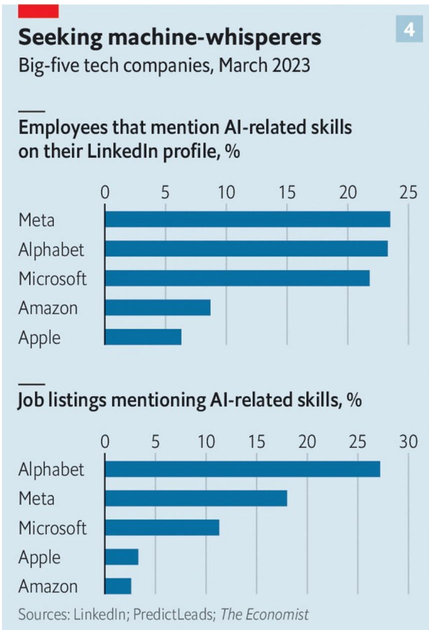
The most single-minded AI acquirer is Apple. Nearly half its buy-out targets are AI-related. They range from AI.Music, which composes new tunes, to Credit Kudos, which uses AI to assess the creditworthiness of loan applicants. Apple's acquisitions have historically been small, notes Wasmi Mohan of Bank of America, but tend to be quickly folded into products.



The Economist

As with investments, big tech's AI hiring, too, is growing (see chart 3). Jobs listed by Google, Meta and Microsoft today are likelier to require AI expertise than in the past three years. Since 2019, 23% of Alphabet's listings have been AI-related. Meta came second, at 8%. Today the figures are 27% and 18%, respectively. According to data from LinkedIn, one in four Alphabet employees mention AI skills on their profile—similar to Meta and a touch ahead of Microsoft (Apple and Amazon lag far behind). Greg Selker of Stanton Chase, an executive-search firm, observes that demand for AI talent remains red-hot, despite big tech's recent lay-offs.

The AI boffins aren't twiddling their thumbs. Zeta Alpha, a firm which tracks AI research, looks at the number of published papers in which at least one of the authors works for a given company. Between 2020 and 2022, Alphabet published about 9,000 AI papers, more than any other corporate or academic institution. Microsoft racked up around 8,000 and Meta 4,000 or so.



The Economist

Meta, in particular, is gaining a reputation for being less tight-lipped about its work than fellow tech giants. Its AI-software library, called PyTorch, has been available to anyone for a while; since February researchers can freely use its large language model, LLaMA, the details of whose training and biases are also public. All this, says Joelle Pineau, who heads Meta's open-research programme, helps it attract the brightest minds (who often make their move to the private sector conditional on a continued ability to share the fruits of their labours with the world).

If you adjust Meta's research output for its revenues and headcount, which are much smaller than Alphabet's or Microsoft's, and only consider the most-cited papers, Mr Zuckerberg's firm tops the research league-table. And, points out Ajay Agrawal of the University of Toronto, openness brings two benefits besides luring the best brains. Low-cost AI can make it cheaper for creators to make content, including texts and videos, that draw more eyes to Meta's social networks. And it could dent the business of Alphabet, Amazon and Microsoft, which are all trying to sell AI models through their cloud platforms.

The AI frenzy is, then, in full swing among tech's mightiest firms. And their AI bets are already beginning to pay off: by making their own operations more efficient (Microsoft's finance department, which uses AI to automate

70-80% of its 90m-odd annual invoice approvals, now asks a generative-AI chatbot to flag dodgy-looking bills for a human to inspect); and by finding their way into products at a pace that seems faster than for many earlier technological breakthroughs.

Barely four months after ChatGPT captured the world's imagination, Microsoft and Google have introduced the new-look Bing, Bard and their AI-assisted productivity programs. Alphabet and Meta offer a tool that generates ad campaigns based on advertisers' objectives, such as boosting sales or winning more customers. Microsoft is making OpenAI's technology available to customers of its Azure cloud platform. Thanks to partnerships with model-makers such as Cohere and Anthropic, AWS users can tap more than 30 large language models. Google, too, is wooing model-builders and other AI firms to its cloud with $250,000-worth of free computing power in the first year, a more generous bargain than it offers to non-AI startups. It may not be long before AI.Music and Credit Kudos appear in Apple's music-streaming service and financial offering, or an Amazon chatbot recommends purchases uncannily matched to shoppers' desires.

If the platform-shift thesis is right, the tech giants could yet be upset by newcomers, rather as they upset big tech of yore. The mass of resources they are ploughing into the technology reflects a desire to avoid that fate. Whether or not they succeed, one thing is certain: these are just the modest beginnings of the AI revolution. ■

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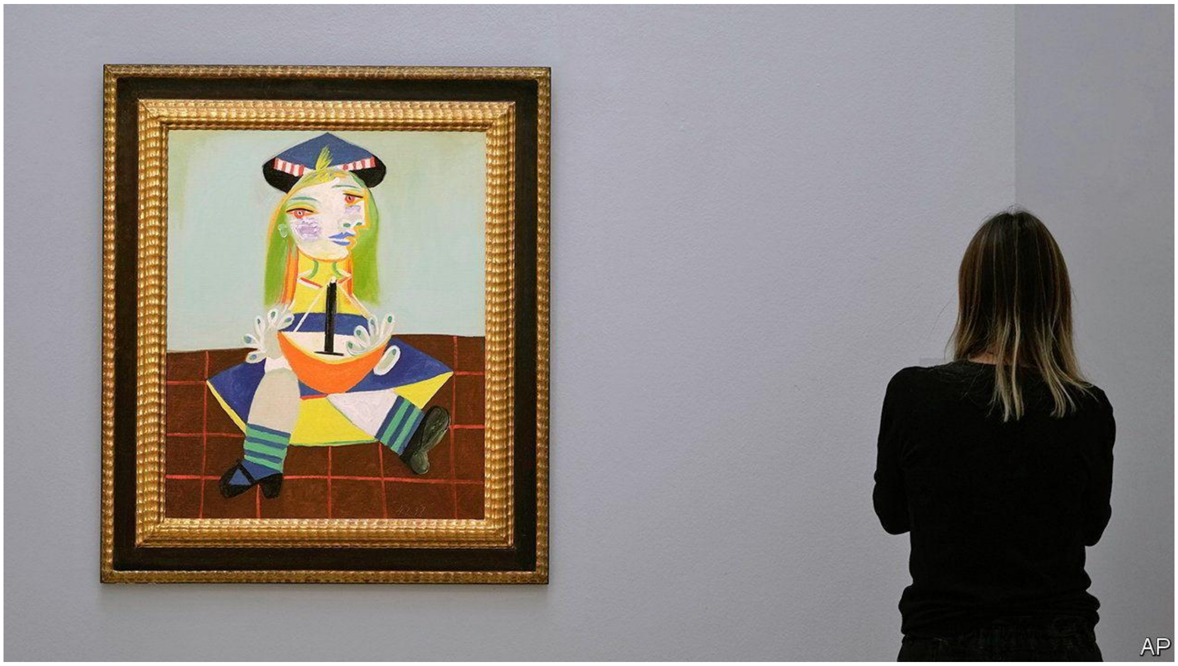
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Peak Pablo

The market for Picassos may be about to turn

After a long bull run, the man and the artist are being re-evaluated

Mar 30th 2023



ARTISTS RARELY create more than 5,000 works over a lifetime. Pablo Picasso, who died on April 8th 1973 at the age of 91, produced 25,000. Between 1950 and 2021 more than 1,500 notable Picassos were sold at auction in America and Britain, compared with 798 by the next-most-prolific artist, Andy Warhol, according to Sotheby's Mei Moses, the art-data arm of the auction house. In its recent London sales, Sotheby's offered a sculpture, an illustrated book, a cubist bronze cast, some gravure prints and several drawings and paintings, all by Picasso. Prices ranged from under £5,000 ($6,200) to more than £18m.

Since 1999 prices of Picasso's works have grown twice as fast as the broader market for 20th-century art. The most expensive Picasso was sold for $180m, reportedly by a Saudi collector to a former prime minister of Qatar. But in the midst of what one commentator calls the "Picassopalooza" around the 50th anniversary of the artist's death, dealers and auction houses are nervous that the long bull market may be about to turn.

One indication is Picasso's waning influence on today's creators. "It is artists, more than anyone, who propel artists of the past into the future," says Ben Luke, a critic. Having interviewed dozens of them, young and old, for a podcast, "A Brush With…", he notes that few cite Picasso as an inspiration. "Marcel Duchamp, yes. Philip Guston, yes. Louise Bourgeois, often," Mr Luke says. That Picasso no longer features on that list is a "monumental shift".

Another thing that could dampen demand for Picassos is the artist's abject personal behaviour. He two-timed his wives and sired children with different women at once. He seduced Marie-Thérèse Walter, who would become his mistress and his muse, when she was 17. He was 45. In 1932 he painted her dreaming, depicting her left cheek and her eye as an erect penis. In the wake of #MeToo all this is becoming harder to separate from the art. The works of other prominent artists, including Balthus and Salvador Dalí, have lost value in the eyes of critics and collectors because of how they they acted in private.

Dealers and collectors are thus anxiously waiting to see how "Celebration Picasso", an exhibition which opens at the Brooklyn Museum in June, will be received. It will "engage some of the compelling questions young, diverse museum audiences increasingly raise about the interconnected issue of misogyny, masculinity, creativity and 'genius'," says the museum. One of the exhibition's curators pulls no punches. Picasso "suffered from the mental illness of misogyny", said Hannah Gadsby, an Australian comedian and art historian, in a Netflix show. "I hate him," she confessed.

"We will be watching it very carefully," says Giovanna Bertazzoni, vice-chairman of the 20th- and 21st-century department at Christie's, another big auction house, of the exhibition. If it is a hit, younger buyers may be put off. With Picasso the artist and Picasso the man falling out of favour, so could his oeuvre. ■

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A six-way bet

Alibaba breaks itself up in six

Investors cheer the move as signalling the end of China's tech crackdown

Mar 30th 2023 | Shanghai



RUMOURS OF AN impending break-up of Alibaba have been swirling for a while. Chinese regulators had long been leery of its market power over the online economy, where its interests spanned e-commerce, digital payments, cloud-computing, entertainment and much else besides. The Communist authorities dislike the idea of anything, let alone a large private business, outshining the party. And the country's leaders bristled at the high profile of Alibaba's founder, Jack Ma, an icon of Chinese enterprise who every now and again dared question their decisions.

All these concerns led to a two-year crackdown on Alibaba and its fellow digital titans that at its worst cost Mr Ma's company 80% of its market value, or nearly $700bn, and nobbled its once-high-flying financial-services affiliate, Ant Group. A forced disaggregation of the empire, some market-watchers whispered, was only a matter of time.

Now a split is happening, though not at the behest of Beijing—at least not directly. On March 28th Alibaba announced that it would be creating six

independent business units. Executives say this will yield a more agile overall business, by speeding up decision-making across smaller and more focused operations. The main unspoken goal may be to decentralise decision-making, not least by disassociating Alibaba further from its founder, who stepped away from day-to-day management in 2015 but has remained involved in strategic decisions.

After the overhaul, e-commerce will remain by far the company's largest unit. Taobao, Tmall and other online marketplaces will be held in a group that accounts for nearly 70% of revenues. The company's artificial-intelligence and cloud-computing operations will form a separate unit, led by Daniel Zhang, the current group chief executive. Mr Zhang will also remain at the head of a holding company that owns the new business groups.

An international unit will hoover up the company's foreign ventures. These include Lazada, the Singapore-based e-commerce firm, and Trendyol, a similar business in Turkey. Cainiao, a large logistics firm, will form its own division. So will a "local services" group that controls Ele.me, a Chinese food-delivery app. The smallest of Alibaba's six daughter firms, with 3% of revenues, will house media assets. Each unit may in future raise capital separately through initial public offerings.

One way to interpret Alibaba's plan is as a pre-emptive effort to placate regulators still hell-bent on putting China's digital darlings in their place. Alternatively, the fact that Alibaba at last felt confident enough to make public a reorganisation that must have been months in the making may hint that the company has concluded the worst of the tech crackdown is over.

Investors' reaction certainly points to the second interpretation. After the announcement Alibaba's share price jumped by 14% in New York, where the company is listed in addition to Hong Kong. Those of other Chinese internet companies, such as Tencent and Meituan, also rallied, perhaps in part on the assumption that, if push came to shove, they, too, would find clever ways of rubbing along with regulators. Mr Ma, for his part, also looks ready to accept that the authorities are no longer out to get his company—or him. On March 27th he was spotted in Hangzhou, Alibaba's home town. It was his first appearance in China after reportedly spending a year in self-imposed exile. ■

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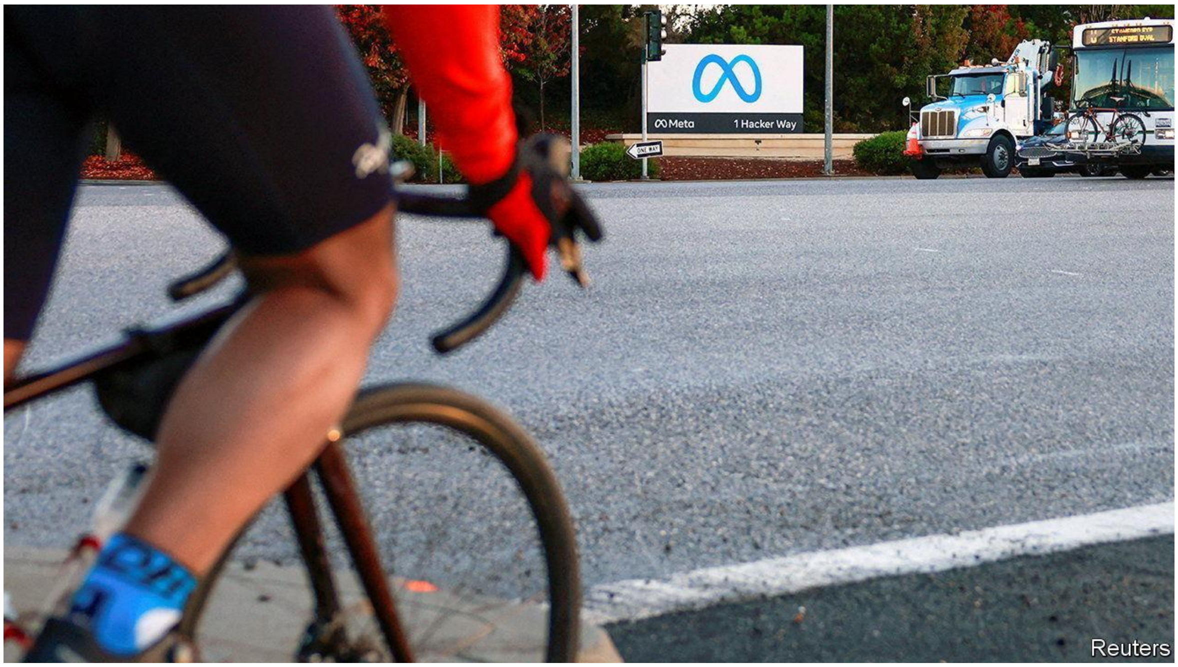
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The sack of Silicon Valley

Where have all the laid-off tech workers gone?

Employment in the technology industry has reached an inflection point

Mar 27th 2023



Reuters

TO UNDERSTAND THE shift in tone that has taken place in Silicon Valley in recent months, look no further than Mark Zuckerberg's declaration in February that 2023 would be the "year of efficiency". It is hardly the kind of language to set the pulse racing—unless you are an employee on the receiving end of it. On March 14th Meta, the tech giant Mr Zuckerberg runs, announced it would fire 10,000 staff—on top of the 11,000 it laid off last November.

Meta is not alone. On March 20th Amazon, another tech behemoth, said it would cut a further 9,000 corporate employees, having already sacked 18,000 white-collar types. So far this year American tech firms have announced 118,000 sackings, according to Crunchbase, a data provider, adding to the 140,000 jobs cut last year.

Investors have cheered tech's new-found cost-consciousness. The technology-heavy NASDAQ index is up by 17% from its recent low point in late December. The companies are hearing the market's message loud and

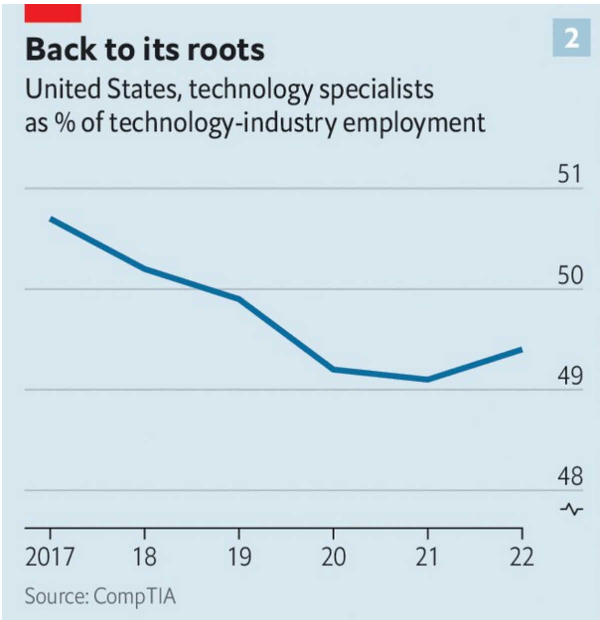
clear. On March 24th the chief operating officer of Salesforce, a business-software firm, hinted that the company would soon add to the 8,000 lay-offs it announced in January.



The Economist

They have a way to go: firings since the start of 2022 represent only 6% of the American tech industry's workforce. Because tech companies continued to hire throughout 2022, lay-offs have only just begun to reduce total industry employment (see chart 1). By comparison, between the peak of the dotcom boom at the start of the 2000s and its nadir at the end of 2003, America's overall tech workforce declined by 23%, or 685,000 jobs.

Still, the recent lay-offs have already been widespread and deep enough to warrant two questions. First, who is getting the chop? And second, where are the laid-off workers going?



The Economist

So far techies themselves have been mostly spared, observes Tim Herbert of the Computing Technology Industry Association, a trade body. Instead, the axe has fallen mainly on business functions such as sales and recruitment. These had grown steadily as a share of technology-industry employment in recent years, a telltale sign of bloat (see chart 2).

Between the depths of the pandemic in the spring of 2020 and peak employment at the start of 2023, the tech sector added around 1m workers. Simply enlisting such numbers required hiring plenty of recruiters; as a headhunting rule of thumb, one recruiter can hire 25 new employees a year. Many of those same recruiters may now be surplus to requirements.

But the specialists are not immune to the efficiency drive. As part of its lay-offs, Meta will restructure its tech functions in April. Releasing talented tech workers back into the wild could be a boon for other sectors wrestling with digital reinvention. For years unsexy industries like industrial goods have struggled to compete with the tech industry for talent. Now they are pouncing. John Deere, an American tractor-maker, has been snapping up fired tech workers to help it make smarter farm machinery. Last year the firm opened an office in Austin, a thriving tech hub in Texas. Carmakers, increasingly focused on software, are also hungry for technologists. So are banks, health insurers and retailers.

Some of the laid-off techies are helping fuel a new generation of startups. Applications in January to Y Combinator, a startup school in Silicon Valley, were up five-fold on the previous year. Excitement is particularly strong in the buzzy field of ChatGPT-like “generative” artificial intelligence (AI), which uses complex algorithms and oodles of data to produce everything from essays to artworks—so much so that even big tech continues to hire enthusiastically in the area (see earlier article).

Optimists hope that this technology will, like the smartphone before it, unlock a new wave of creative destruction, as AI entrepreneurs conjure up a variety of clever applications. The new AIs may in time mean even less need for, say, human marketers. But they could, like other breakthroughs before them, create entirely new job categories—not least in the technology industry itself. ■

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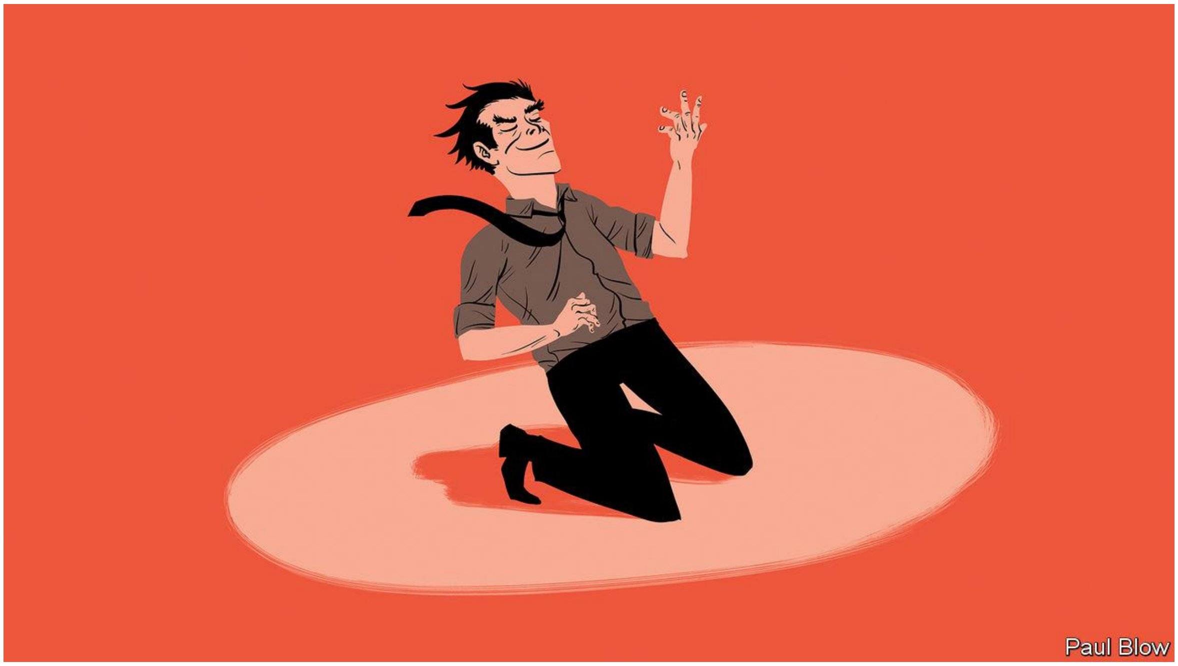
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Bartleby

A zero-tolerance approach to talented jerks in the workplace is risky

Even if banning them sounds attractive

Mar 30th 2023



ONE PERSONALITY type occupies more attention in the workplace than any other. The "talented jerk", whose alter-egos include such lovable characters as the "toxic rock star" and the "destructive hero", is a staple of management literature. These are the people who smash both targets and team cohesion, who get stuff done and get away with behaving badly as a result.

So common and corrosive are these characters that plenty of companies spell out a zero-tolerance approach to them. "No jerks allowed," says CARFAX, which provides data on vehicle histories. Netflix, a streaming giant, is similarly unequivocal: "On our dream team, there are no brilliant jerks." The careers site of Baird, a financial-services firm, says that it operates a "no assholes" policy.

It is totally reasonable for firms to want to signal an aversion to genuine jerks. It may not actually put people off ("No assholes? Well, I guess Baird isn't the company for me."). But it sends an explicit message to prospective and existing employees, and reflects a real danger to company cultures. Toxic behaviour is contagious: incivility and unpleasantness can quickly become norms if they pass unchecked. That is bad for retention and for reputation. It's also just bad in itself.

Moreover, the extreme version of the management dilemma posed by the talented jerk rarely exists in practice. The risk that you may be getting rid of the next Steve Jobs is infinitesimal. Just contemplate all the jerks you work with. If you really think they are going to revolutionise consumer technology, create the world's most valuable company or have members of the public light candles for them when they die, you should probably just go ahead and make them the CEO. But the red-faced guy in sales who shouts at people when he loses an account is not that person.

That said, the enthusiasm for banning jerks ought to make people a little uneasy, for at least three reasons. The first is that the no-jerk rule involves a lot of subjectivity. Some types of behaviour are obviously and immediately beyond the pale. But the boundaries between seeking high standards and being unreasonable, or between being candid and being crushing, are not always clear-cut. Zero tolerance is dangerous. You may mean to create a supportive culture but end up in a corporate Salem, without the bonnets but with the accusations of jerkcraft.

The second is that jerks come in different flavours. Total jerks should just be got rid of. But they are rare, whereas bit-of-a-jerks are everywhere and can be redeemed. The oblivious jerk is one potentially fixable category. Some people do not realise they are upsetting others and may just need to be told as much.

Other people are situational jerks: they behave badly in some circumstances and not in others. If those circumstances are very broad (whenever the person in question is awake, say), then that tells you the problem cannot be fixed. But if jerkiness occurs only at specific moments, like interacting with another jerk, then it may be that a solution exists. If the thing that a talented jerk does really well can be done in comparative isolation or without giving

them power over other people, consider it. As the well-known philosophical teaser goes: if a jerk throws a tantrum in their home office and no one is around to see it, are they really a jerk?

A third issue is one of consistency. This is not just about what happens when the person declaring war on jerks is also a jerk. It is also about the many other problem types who crowd the corridors of workplaces. Where are the policies that ban constructive wreckers, the people offering up so many ostensibly helpful criticisms that nothing ever actually gets done? Why not zap the brilliant fools who have blinding insights of absolutely no practical value?

Above all, what about the pool of nice underperformers who putter along amiably and harmlessly, helping the culture much more than they do the bottom line? Talented jerks stand out, like shards of glass among bare feet: impossible to ignore, problems that have to be solved. Mediocrities are the bigger problem in many firms but are like carbon monoxide, silently poisoning an organisation.

Right-minded purists will argue that anything less than zero tolerance towards talented jerks is just pandering to people who behave badly. But right-minded purists will have skated over paragraph three and are a scourge in their own right. Someone ought to write a management book about them.■

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How to get flexible working right (Mar 23rd)
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Schumpeter

Copper is the missing ingredient of the energy transition

Where on Earth will it be found?

Mar 30th 2023



Brett Ryder

AT 76, RICHARD ADKERSON is an elder statesman of the copper industry. For two decades he has been CEO of Freeport-McMoRan, one of the world's biggest copper producers, valued at $55bn. He has seen it all, from short-term booms and busts to the China-led supercycle, and from industry fragmentation to consolidation. Freeport itself has pioneered some of the trends. In 2007, when it paid $26bn for Phelps Dodge, an Arizona-based company dating back to the Wild West days of the 19th century, it was the biggest mining transaction ever. It was also a masterstroke. Not so the company's ill-fated diversification into oil and gas less than half a decade later, which he says was not his idea. That caused a near-death experience and had to be swiftly unwound after both energy and metal prices crashed in 2016.

Appropriately for a mining-industry executive, he has a gravelly voice, which he uses to conjecture about a potential copper crunch. The pressures

of industrial development in the emerging world, as well as progressing electrification and decarbonisation as part of the energy transition, are likely to turbocharge demand for the red metal. S&P Global, a consultancy, expects copper consumption to double to 50m tonnes between now and 2035. Yet unless prices rise sharply, supply is unlikely to keep up. Besides new copper mines coming on stream in Mongolia and the Democratic Republic of Congo, such projects are thin on the ground, Mr Adkerson says. Concerns about the environment and indigenous rights make it harder to win approval for them. Moreover, in both Chile and Peru, which together produce nearly 40% of the world's copper, mining is vulnerable to national politics.

As Mr Adkerson puts it, this is not a supply problem that money alone can solve. "There is just a scarcity of actionable investment opportunities in the world today," he says. Wisely, he does not go as far as suggesting the world is running out of copper. Instead, he tells a story dating back to the days early in his career when he was a consultant to the oil industry. One of his friends was Matthew Simmons, a Texas-based investment banker famous for promoting the theory of "peak oil", which posited that the world was running short of the stuff. And one of his clients was George Mitchell, who later gained fame as the father of the shale revolution that made a mockery of the peak-oil mantra. It was a salutary lesson, he chuckles. He always keeps one eye over his shoulder for a shale-oil equivalent in the copper business.

The comparison between the oil and copper businesses is useful. It helps illustrate the complexities of mining the metal. It also hints at how shortages may be overcome. Start with the differences between the two commodities. As Mr Adkerson explains, the technology for finding copper is not as effective as the seismic testing used to identify hydrocarbon reservoirs because copper deposits are spread over vast areas. Years of exploratory drilling are required. Moreover, a lot of oil exploration is done in the ocean, but as yet deep-sea mining is nascent and environmentally sensitive. Mr Adkerson notes that Lockheed Martin, an American armsmaker that had thrown its weight behind deep-sea mining, has just sold a subsidiary with licences to explore part of the Pacific Ocean. In effect, it is quitting the venture.

There are also stark differences in production. Not only is copper mining more concentrated by region than oil drilling. Whereas it takes years to go from licensing to operating an oil well, it can take a generation to develop a "greenfield" copper mine. The consolation prize is that copper mines do not deplete as quickly as oil wells. Some of Freeport's mines date back more than 100 years.

Next consider the similarities. During the commodities supercycle up to the mid-2010s, both industries blew shareholders' money on wildly overambitious projects, which landed them in the sin bin. Even as concerns about oil and copper supplies have mounted, investors have demanded shareholder payouts rather than risk equity on big capital projects. This has been exacerbated by pressure to reduce resource extraction from investors worried about environmental, social and governance (ESG) issues.

Yet the mood may be starting to shift. In the oil industry, high prices of crude have led companies like Shell and BP to rethink the pace at which they cut oil production. Similarly, copper miners are becoming bolder. In April BHP, a diversified mining giant, will put to shareholders of Oz Minerals its $6.4bn proposal to take over the Australian copper-miner. If approved, it will be its largest acquisition since 2011. Freeport says that it will raise capital expenditure this year to $5.2bn, up from $3.5bn in 2022, chiefly to expand underground development at its Indonesian mine, Grasberg. Mr Adkerson points out that some of this increase is a result of rising costs. But he also detects a new mood among investors. "Today, when I speak with our shareholders, they ask us where the growth is going to come from."

Cu later

There are two possible answers. The first is to double down on "brownfield" sites where mines already exist. Freeport has 22m tonnes of copper reserves in America alone. It takes between six and ten years to develop such projects, and the current severe labour shortage could make it harder still. But it is more promising than starting from scratch. The second answer is technology. Mr Adkerson says Freeport has about 17m tonnes of residual copper left in its leaching processes. He hopes that new reagents, as well as new operating techniques using data analytics, will recover some of that in a

way that is less costly than digging a new mine, emits less carbon and faces fewer regulatory hurdles.

The veteran miner doesn't think this will have as impressive an impact on copper supply as the shale revolution did on oil. But he would say that. The greater the perceived scarcity, the higher the value of Freeport's reserves, and the more his company is worth. You can almost hear him rubbing his hands at the prospect. ■

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Also: If you want to write directly to Schumpeter, email him at schumpeter@economist.com. And here is an explanation of how the Schumpeter column got its name.

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Finance & economics

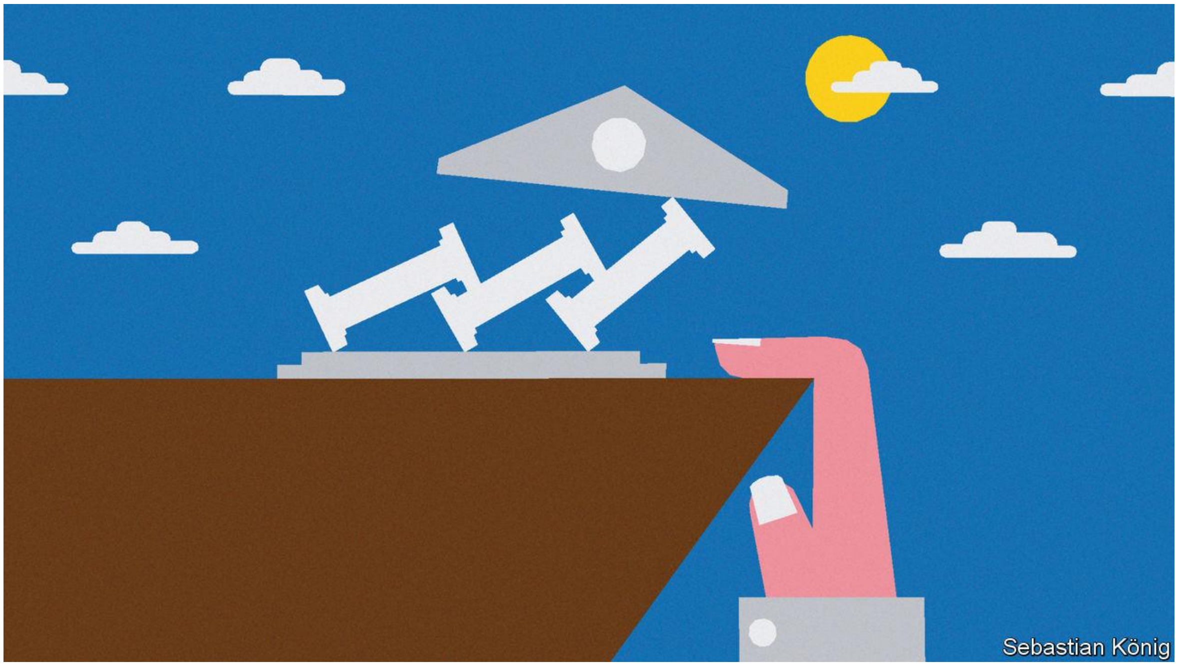
- **Will the recent banking chaos lead to an economic crash?**
- **Commercial-property losses will add to banks’ woes**
- **European banks and the price of safety**
- **Did social media cause the banking panic?**
- **Western lenders may regret forcing Ukraine to turn to the IMF**
- **How rare-gas supply adapted to Russia’s war**
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Dime turners

Will the recent banking chaos lead to an economic crash?

So far, people seem remarkably blasé

Mar 28th 2023



HOW QUICKLY things change. Not long ago analysts thought the global economy was powering ahead; now they worry about a deep recession caused by fallout from the banking turmoil. "From no landing to hard landing", as Torsten Slok of Apollo Global Management, an asset manager, has written. Analysts at JPMorgan Chase—better at economics than metaphors, one hopes—say that "a soft landing now looks unlikely, with the airplane in a tailspin (lack of market confidence) and engines about to turn off (bank lending)".

Evidence from before the chaos suggested global GDP was increasing at an annualised rate of 3%. In rich countries, job markets were on fire. So far there is scant evidence of a shift in "real-time" data towards slower growth. A "current-activity indicator" produced by Goldman Sachs, a bank, derived from a variety of high-frequency measures, looks steady. Purchasing-manager indices showed a slight improvement in March. Weekly measures

of GDP produced by the OECD, a rich-country club, are holding up. UBS, another bank, tracks global GDP growth as priced by financial markets (in prices of oil and cyclical shares, for example). This currently indicates growth of 3.4%, versus 3.7% before Silicon Valley Bank (SVB) collapsed.



The Economist

It is still early days. Pain may be on the way. As the JPMorgan analysts noted, economists have two worries. One is uncertainty. If people fear a banking crisis and the accompanying economic pain, they may cut consumption and investment. The other relates to credit. Financial institutions, fearing losses, may pull back on lending, depriving firms of capital. Fortunately, there is reason to think recent turmoil will have less impact than many fear.

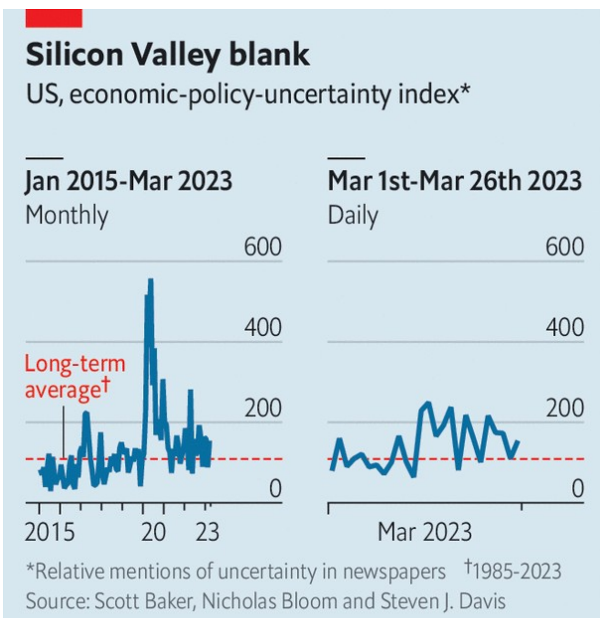
Take uncertainty first. IMF research published in 2013 finds that leaps in uncertainty—caused by things like America's invasion of Iraq and bank collapses—can trim annual GDP growth by 0.5 percentage points, largely because firms delay investment. If such a hit were to materialise, global growth would fall from 3% to 2.5%.

Yet unless the turmoil continues, the impact is unlikely to be that significant—because bank collapses have made surprisingly little impression. A survey by Ipsos, a pollster, found that from early to mid March American consumer

confidence grew a bit, even as startups in Silicon Valley worried their cash would vanish. An "uncertainty index" derived from analysis of newspapers by Nick Bloom of Stanford University and colleagues rose a little when the turmoil began, but is drifting back down. German business sentiment improved in March. Google searches for terms related to "banking crisis" jumped in early March, but have also fallen again.

It is hard to say why people are so blasé. Perhaps after pestilence and war, ructions in the banking industry seem more manageable. Or perhaps people think governments will step in to protect them.

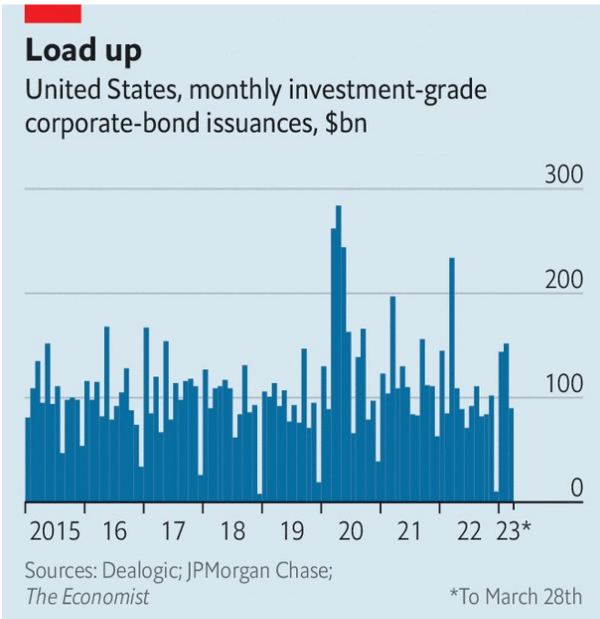
Many economists worry more about the second problem: credit. If firms cannot get their hands on finance, they cannot grow so easily. On March 22nd Jerome Powell, chairman of the Federal Reserve, referred to a "very large body of literature" when asked about the connection between tighter credit conditions and economic activity. In the years after the global financial crisis of 2007-09, broken credit markets held back both the short-term economic recovery and long-term productivity growth.



The Economist

After the fall of SVB, capital markets froze. From March 11th to 19th American firms issued no new investment-grade bonds, having issued a daily average of $5bn in January and February. This caused consternation.

Fewer people noticed when the market picked up. In recent days Brown-Forman, which makes Jack Daniel's whiskey, and NiSource, a utility firm, have raised lots of money. Although spreads on corporate bonds rose a little after the collapse of SVB, they too have fallen back in recent days. Companies may have briefly held off issuing new debt to check that the coast was clear. But it seems likely March 2023 will turn out to be a fairly average month for corporate-debt issuance.



The Economist

Damage to banks will prove more consequential. Since the start of March global banks' share prices have tumbled by more than 10%. Research suggests falling share prices tend to hit loan growth. Banks may also cut lending if they see deposit outflows, or need to raise capital because investors doubt their safety. Indeed, many already appear to be tightening standards. The hit to lending implies a growth drag of 0.4 percentage points in both America and the euro area, according to Goldman Sachs. The turmoil may have hurt American banks more, but the euro-zone economy is more dependent on bank lending. This could cut global growth yet further, from 2.5% to something more like 2%.

Although the recent banking turmoil is hardly good news, it is unlikely to push the world economy over the edge. True, another rotten bank could cause a downward spiral. Lenders will take time to rebuild balance-sheets.

Rising interest rates will continue to impede growth until central bankers judge their work done. But there are forces working in the other direction, too. One is the rebound of China. Economists expect the world's second-largest economy to grow by over 7% year on year in the second quarter of the year. Meanwhile, supply-chain bottlenecks have mostly eased and energy prices have fallen. Do not be surprised if the world economy's unusual resilience continues. ■

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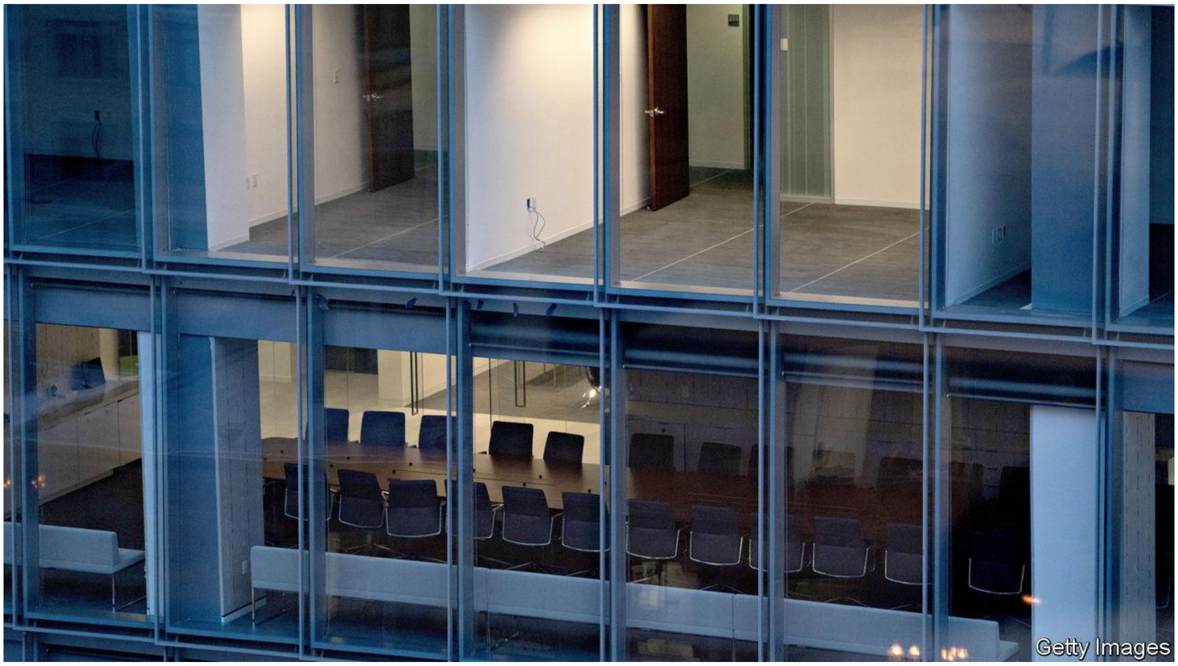
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The next shoe to drop

Commercial-property losses will add to banks' woes

Real-estate investors see a hellish-perfect-dumpster-fire-storm

Mar 29th 2023 | Washington, DC



ASK AN INVESTOR to describe the outlook for commercial property and you will get a colourful response. "Office is a dumpster fire," says Daniel McNamara of Polpo, an investment fund. His view of the wider market, which includes shops and warehouses, is only a little less grim: "It really is the perfect storm." Tom Capasse of Waterfall Asset Management, an investment firm, has nicknamed places where the tech bubble has burst, including San Francisco and Seattle, "office hell."

A combination of nasty events has produced this hellish-perfect-dumpster-fire-storm. The lingering impact of covid-19, which kept shoppers away from malls and workers at home, has undermined the value of shopping centres and offices; all real-estate valuations are undermined by higher interest rates, which push up landlords' expenses. These woes have been added to by the recent banking turmoil and fears of a recession in which workers are laid off and their former employers downsize.



The Economist

The situation poses a problem for two big, intertwined American industries. The first is property, where owners are grappling with the idea that the office buildings they own—uncomfortably empty and unlikely to fill up again—might be worth only half what they paid for them. The second is their financiers. When Brookfield, an asset manager, recently decided it would be better off handing over the keys of two vast office towers in Los Angeles, rather than refinancing the $784m of loans it owed on them, it handed the keys over to Citigroup and Morgan Stanley, two big banks.

No commercial-property sector looks insulated. “Even in warehousing you have seen firms like Amazon admit they overspent and overbuilt,” says Mr McNamara. But the real concern is office space, which makes up around a quarter of total commercial property (and its debts) in America, because “it is not a cyclical issue”.

Vacancy rates have risen in all but the best offices. Landlords are offering generous incentives to lure skittish tenants. In San Francisco more than 29% of offices are empty, nearly eight times the pre-pandemic level. Asking rents in the city, which has seen the biggest jump in vacancies across America, are down by 15% compared with 2019. As these buildings can have high costs to run, in part owing to property taxes, even a small dip in rents or occupancy can turn a building into a lossmaker.

Some landlords may be unable, or unwilling, to hang on to these properties. They may be unable if they cannot roll over their loans. Around 15% of outstanding commercial-property debts across all lender types in America are maturing this year, reports Kevin Fagan of Moody's Analytics, a research firm. Of these, he thinks about 40% might have trouble refinancing. Landlords may be unwilling if the buildings involved are clearly worth less than the value of the loan. There are examples of "bigger sponsors pre-emptively giving back the keys even a year before loans were due to expire," notes Mr Capasse.

At the end of 2022, the commercial-property industry owed $5.6trn in debt to investors and financial institutions. According to Trepp, a data provider, half of this was to banks. Brookfield and funds of its size might need to repay big institutions, but the vast majority are on the hook to lenders with below $250bn in assets—ones which are already under severe stress after the collapse of Silicon Valley Bank.

The danger is that banks end up with lots of offices, which they have to sell at deep discounts. This will bring back memories of the global financial crisis of 2007-09. But there are reasons to think history will not repeat. First, commercial property is worth just half as much as residential real estate, which is where problems were last time around. Second, lax lending saw banks grant mortgages worth as much as 100% of a home's value before the financial crisis. Commercial-property lenders, by contrast, offer a borrower a maximum 75% mortgage, meaning prices will have to fall much further for banks to face losses.

Even the worst-case scenario would have limited impact. Roughly a quarter of the $2.2trn of commercial-property loans owed to small banks are office loans. Imagine that landlords hand back the keys on half these loans this year—some $280bn in total. If banks could recover just half the value of the loans by selling off the assets at deep discounts (say, a third of their value three years ago) they would be wearing losses of $140bn. That is just 10% of the equity capital that small banks hold. The blow would be unevenly distributed, however, and could imperil some institutions.

The office apocalypse

There remains the question of what happens to buildings no one wants to work in anymore. Many offices already need sprucing up. And building costs are sky-high, thanks to material and labour shortages, as well as new laws around the world which seek to make buildings greener. Energy-efficiency rules in England and Wales, for example, will make it unlawful to let one in twelve buildings in London from April 1st, unless landlords upgrade them.

Ryan Williams of Cadre, a property-investment platform, foresees two paths. The first is a "fundamental repricing, where the banks take back the keys and sell assets at a huge discount". This might allow new buyers to adapt, upgrading or maintaining buildings so that they suit lower occupancies. In the second, local officials step in: "It is not in the interest of [many cities] to see a whole street of lower-tier office buildings become blighted, so governments may start to offer incentives to renovate or convert." In some places, this kind of adaptation is already happening. Look out of the windows at *The Economist*'s office in Washington and on any given weekday a handful of builders are busy converting the old Vanguard building, an office that once housed the Peace Corps, into a block of shiny new apartments. ■

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Credit where it's dull

European banks and the price of safety

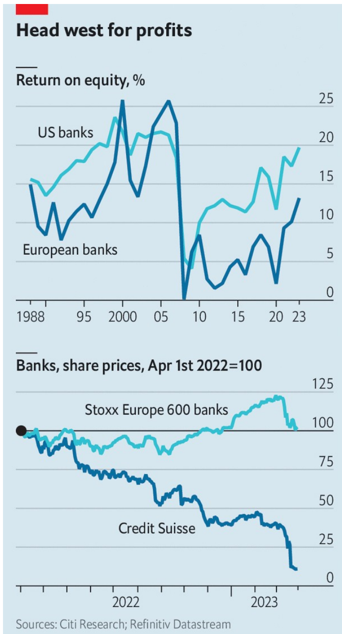
Investors are anxious that troubles elsewhere could contaminate euro-zone lenders

Mar 30th 2023



"GREECE IS NOT Switzerland," quipped an analyst on March 20th after the Greek central-bank governor assured investors his country's banks would not suffer from the implosion of Credit Suisse the weekend before. Investors are anxious that troubles could contaminate euro-zone lenders. Their share prices have sunk since March 9th and are still volatile.

That is a disappointment. After being struck by the global financial crisis of 2007-09 and the sovereign-debt crises shortly after, the euro zone's big banks were brought under the supervision of the European Central Bank (ECB). As rules were toughened and dud assets flushed, banks became boring but more resilient. Now, "it seems the market is sifting through one balance-sheet after another", frets a mover and shaker. Three risks stand out.



The Economist

The most immediate is a liquidity crunch. In September liquid assets held by European banks stood well above 150% of what regulators assume a deposit outflow in a crunch month would involve. But the speed at which deposits were whisked from Silicon Valley Bank and Credit Suisse suggests such assumptions are too rosy. It does not help that the data European banks disclose on the nature of their deposits is less detailed than in America, prompting some investors to assume the worst.

Thankfully, a vast chunk of deposits is held by households, which are mostly insured. Those that are not tend to belong to a diverse array of firms, rather than a coterie of depositors who mimic each other, such as Swiss family offices or Silicon Valley startups. Europe also lacks money markets of the same depth and ease of access as Uncle Sam's, so there are few liquid, lucrative alternatives to bank accounts. This is why most corporate overnight deposits that have been withdrawn—some €300bn ($325bn) since the summer—re-entered banks as "term" deposits, in less flexible accounts that offer higher returns.

A second threat to European banks is deteriorating assets. Here, too, the danger seems manageable. Like bonds, the value of existing loans on banks' books diminishes when interest rates rise. But regulators in Europe have forced banks, big and small, to buy hedges against that risk.

The third is that borrowers fail to honour their dues. Investors particularly worry about credit extended to owners of commercial property. Rising interest rates and a worsening economic outlook are putting pressure on prices and rents at a time when owners have to pay more to service debts. The saving grace is that European banks are less exposed to commercial property than American ones.

As the economy stalls, a wider range of loans may sour. But banks now have ample capital buffers to absorb losses. Between 2015 and September 2022, the share of core equity funding of banks increased from 12.7% to 14.7% of their risk-weighted assets, well above the 10.7% threshold required by regulators. Some made provisions for loan losses during covid-19, which could be repurposed to absorb new losses. A chunk of corporate loans also remains under government guarantee.

This leaves euro-zone banks with a painfully familiar problem: they make too little money. The issue has dogged them since the 2010s, when a heap of foul assets, low interest rates, anaemic economic growth and stricter rules constrained both margins and revenues. In 2022 it had seemed as if things were finally improving, as rising rates boosted banks' profits. That year the sector posted its first double-digit return on equity in 14 years.

But these cash-filled dreams are fading. One reason for this is that rates will probably peak sooner and lower than expected just weeks ago, as central bankers adjust to banking fragility and a slowing economy. This will depress banks' revenues. At the same time, funding costs are expected to rise. Depositors are hunting for better yields, forcing banks to offer juicier rewards. Meanwhile, investors in banks' Additional-Tier 1 bond will demand higher premiums after some were wiped out during UBS's takeover of Credit Suisse.

These pressures will squeeze net interest margins—just when other costs threaten to dent bank profits. Wages, which represent 60% of overall bank costs, have yet to fully catch up with inflation. The premiums banks pay for deposit insurance will probably rise, too. JPMorgan Chase, a bank, predicts such costs alone could trim returns on tangible equity by one percentage point. Watchdogs may also tighten rules to make sure institutions can withstand rapid bank runs facilitated by digital banking and social media.

All told, returns on equity of 10% or less are probably European banking's future. That is not the end of the world. Such returns are enough for banks' balance-sheets to grow at 2-3% a year, meaning customers need not expect credit to be rationed soon, says Ronit Ghose of Citigroup, another bank. Core services like digital banking should not be starved of investment. For shareholders it will be like investing in a utility—nice dividends, but little action.

The downside is that racier firms, such as startups, will have to look elsewhere for funding, pushing risk to darker corners of the financial system. Punters hoping for hefty returns will be disappointed. To avoid bottom-line boredom—in both good ways and bad—investors might keep looking across the pond. ■

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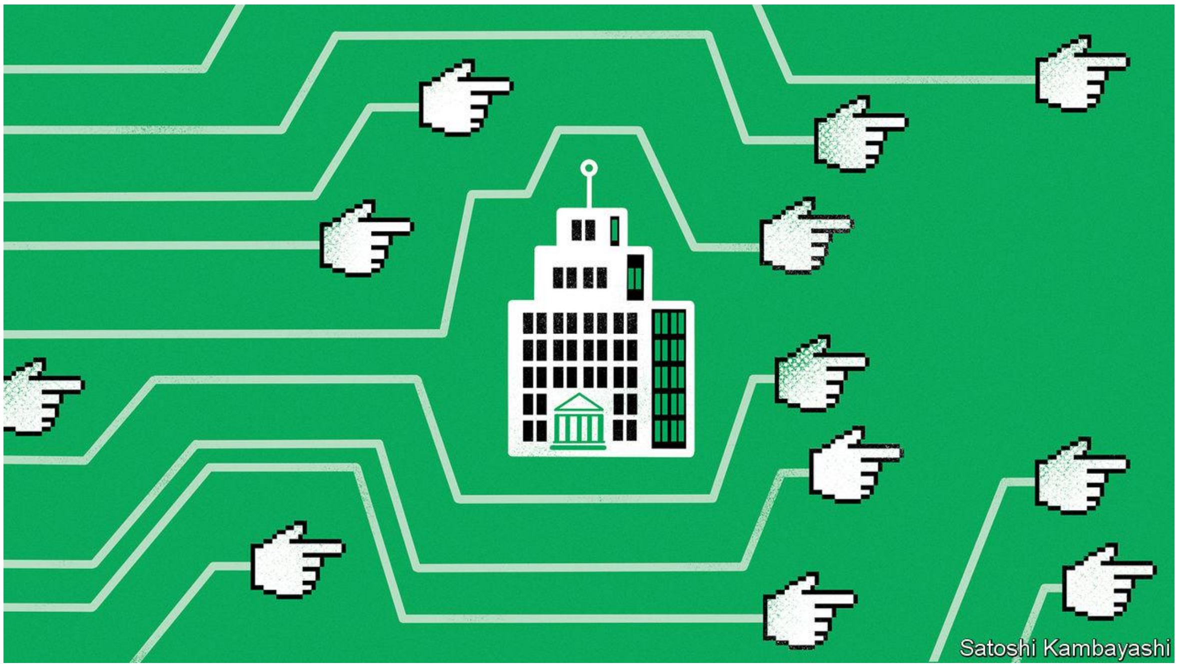
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Buttonwood

Did social media cause the banking panic?

New technology does more than just speed up financial wobbles

Mar 30th 2023


Satoshi Kambayashi

THE BANKING turmoil that has sent a handful of American and European lenders to the wall in recent weeks has a new feature. Use of social media and messaging apps, which spread information at lightning pace to an ever-larger group of panickers, marks a break from past crises. Meanwhile, new digital-finance tools let nervous depositors withdraw funds as soon as the notion strikes them, whether from offices in San Francisco or ski slopes in Saint Moritz.

After the fall of Silicon Valley Bank, the idea of faster bank runs is understandably causing concern among analysts and legislators. Yet the wave of new tech in the past decade and a bit is by no means the first to change behaviour. Previous examples suggest something of a pattern: innovations initially help facilitate a boom, contributing to exuberance based on a sense of futuristic possibility, before speeding up and magnifying the eventual bust. History also suggests that recent technological changes may have a deeper impact, reshaping markets in the long run, too.

From the 1840s onwards, America was blanketed by the electric telegraph, which transmitted messages by overhead wires, connecting previously disparate financial markets in Boston, Chicago, New York and Philadelphia. In 1866 reliable communication became possible between America and Europe as well, thanks to an undersea telegraph cable. Historians credit these new methods of transmitting financial information with smoothing out pricing inefficiencies. The gap between American and British cotton prices dropped by a third, for example, and volatility also declined. The new form of communication was significant enough to have left a legacy. Among currency traders, the sterling-dollar exchange rate is still known informally as “cable”.

But efficiency often comes at a cost. In the 19th century, communication by cable was expensive and limited, and the information received at risk of manipulation by those transmitting it. During the panic of 1873, correspondents at *The Economist* went back and forth about whether the debilitating effects of new technologies, spreading panic from one market to another, outweighed the positives. A century later, new technology again provoked worries during a market crash in October 1987. The Brady Commission, which later investigated the slump in America, found that electronic communication across borders exacerbated problems. Traders and regulators believed they were in the more insulated, national markets of the past. They were not.

The effect that technological breakthroughs have on banking crises is just one way they transform financial markets, however. John Handel, an economic historian at the University of Virginia, notes that increasingly widespread use of ticker tape—a more advanced form of telegraph-transmitted messaging—in late-19th-century finance enhanced the power of the institutions that monopolised it. The London Stock Exchange and the Exchange Telegraph Company, which was licensed to transmit data from the exchange, were beneficiaries. This helped formalise the role of the stock exchanges in global financial markets.

Historically, banks have benefited from high transaction costs and the low financial literacy of customers, which together have kept depositors from moving too much money into higher-yielding money-market funds. Today new communications tech and digital finance mean the investing populace is

both more aware of the alternatives to bank deposits and has more opportunity to invest in them. Recent research by academics at Columbia, Peking and Stanford universities notes that Chinese banks where depositors have more exposure to Yu'ebao, an online investment platform offering money-market-fund investments, see more withdrawals from customers. New tech might have helped facilitate the surge of almost $300bn into American money-market funds in March, further destabilising banks.

Innovation has sped up sudden market wobbles, truncating panics that would have taken months in the 19th century to weeks. In the modern era, timelines have contracted further, from weeks to days or even hours. Yet this may turn out to be just one of the ways in which frictionless trading and freely available information, of varying quality, affect finance in years to come. The profits banks have enjoyed for decades—or centuries—thanks to high transactions costs and low financial literacy might also become harder to sustain. ■

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Funding conflict

Western lenders may regret forcing Ukraine to turn to the IMF

The worst outcome would be crippling the country with debts while it is still at war

Mar 30th 2023



WAR IS TEARING apart Ukraine's economy. Last year the country's GDP fell by 30%; a ballooning budget deficit forced the central bank to print billions of hryvnia and devalue the currency. On March 21st the IMF announced Ukraine would receive the seventh-biggest bail-out in the fund's 79-year history. The country is set to receive $15.6bn over the next four years through an emergency programme that may be approved by the IMF's board (on which Russia has a seat) next week.

Although a huge sum for the fund, this is still nowhere near enough for Ukraine. The country estimates that to continue financing the war this year, it will need $39.5bn more than it expects to receive from tax and aid, a shortfall equivalent to 9% of GDP. The IMF is expected to release at most $5bn this year. The rest, it says, should come from the likes of America, Europe and the World Bank. Such donors have stumped up at least $34bn in

grants and loans at cheap interest rates since the war began. The hope is that the IMF's involvement, which includes a stress test of Ukraine's economy and its debts, will coax them into providing more.

Even if Ukraine cobbles enough together to fill the gap, there is the matter of repayment. Borrowing from the IMF is expensive—more so than from other donors. As a middle-income country, Ukraine has to pay a basic interest rate of 3.5%. Every time it receives a disbursement, the fund charges an additional half a percentage point for administrative costs. And because Ukraine is borrowing so much, it is liable for surcharges. These are payments intended to discourage countries from seeking more than they require from the fund. By the time Ukraine has received its full package, surcharges will probably tack on an extra three percentage points to its interest bill. All told, Ukraine's government could rack up rates of 7.5-8%.

Surcharges are not the end of the attached strings. All IMF loans come with economic prescriptions. On paper these should boost growth and fiscal discipline, helping the borrowing country to repay its debts. The fund has struggled to adapt its bread-and-butter prescriptions for misbehaving economies to an economy under siege. Some of its suggestions may prove useful. After getting into a scuffle with the government last year about printing money, the central bank will welcome the fund's demand that no more printing take place. Other reforms, such as a commitment to reactivate domestic debt markets, are admirable, if a little difficult to get going while bombs fall. But the IMF's most substantial reforms typically revolve around restraining spending, which is simply not an option so long as Ukraine is at war. So far, the fund has said it plans to recommend fiscal reforms, but stayed vague on the details. Given that it has a reputation for heavy-handedness, any missteps in Ukraine could prove disastrous.

Although these risks in theory should be incorporated into the IMF's stress tests, the fund's forward-looking analysis is easily thrown off balance. Predicting the future of any crashing economy is tricky. Nailing down what Ukraine's economy, caught in an invasion, might look like in a year, let alone at the end of the four that the programme covers, is even more difficult. At the moment, the fund has a four-percentage-point range of expectations for GDP growth in 2023, from -3% to 1%. If Ukraine's fortunes fall at the lower end of the spectrum, or below, the worry is that the fund will

have wildly overestimated its ability to repay. The nightmare would be crippling the country with debts while it is still at war, or just beginning to recover.

"There needs to be economic support for Ukraine but its allies should have borne the risk, not the IMF," argues Mark Malloch-Brown of the Open Society Foundations, a campaign group, "and done so with grants instead of letting Ukraine rack up debt." For some, the fund is bringing back memories of the last time it lent at scale in Europe: bail-outs to Greece, Ireland and Portugal in the wake of the euro-zone crisis. Just as France and Germany did too little then, Kyiv's allies are doing too little today. Ukraine will bear the cost. ■

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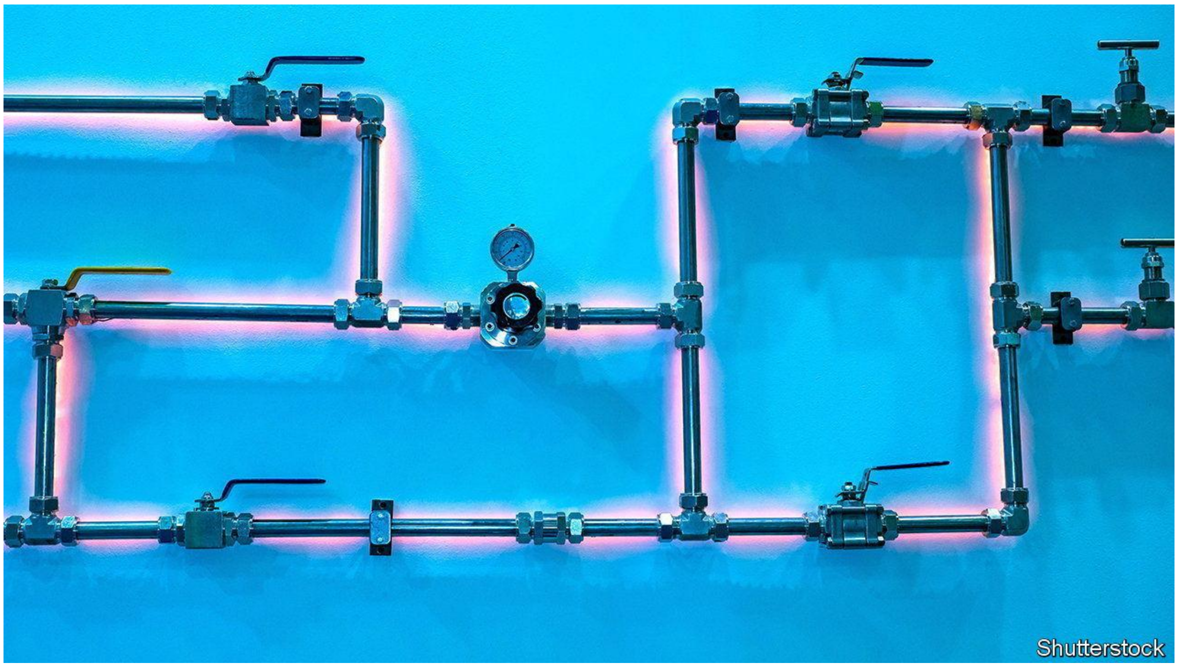
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Neon lights, shining bright

How rare-gas supply adapted to Russia's war

Against expectations, firms avoided disruption and chaos

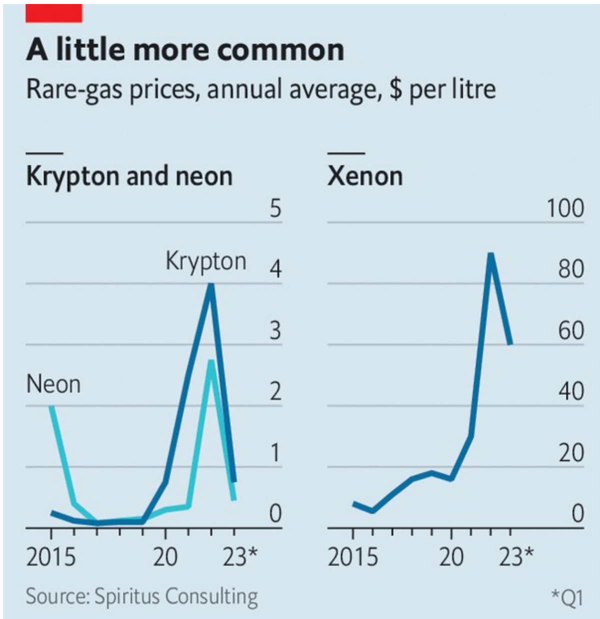
Mar 30th 2023



THE WAR in Ukraine has reconfigured global flows of oil and gas. Less visible has been its impact on another supply chain: that of the so-called rare gases—neon, krypton and xenon—which are used in everything from chipmaking to medicine to space propulsion. Russia and Ukraine have long been big suppliers, accounting for about 40-50% of the global supply of neon before the conflict, and 25-30% of xenon and krypton, according to John Raquet of Spiritus Consulting, an industrial-gas specialist. At times, their share of the supply of neon has been as high as 70%.

Hence the concern, after Russia's invasion, about disturbance to chipmakers, which use neon in the lasers that etch circuit patterns onto silicon wafers, and in turn supply other industries. The Joint Research Centre, the European Commission's scientific-advisory body, warned of "severe" disruption, and noted a shortage of neon could "substantially impact industrial supply chains reliant on semiconductors". Worse, as the war began, the semiconductor

industry was seeking to ramp up output to meet post-pandemic demand. A year later, however, it is clear that chaos has been avoided. What went right?



The Economist

Krypton, neon and xenon are by-products of air separation, an industrial process used in steelmaking to extract oxygen and nitrogen from the atmosphere. This allows the recovery of leftover mixtures, from which the gases can be extracted at specialist purification facilities. In the 1980s the Soviet Union built air-separation plants at steel mills in Russia and Ukraine. Its aim was to produce gases for use in military lasers, to compete with America's "Star Wars" programme. After the Soviet Union fell, Russia and Ukraine became global suppliers of rare gases. Even after Russia's annexation of Crimea in 2014, Russian steel mills continued to send rare-gas mixtures to Ukraine for purification.

This flow stopped after Russia's invasion last year. The conflict also affected the operation of steel mills in Ukraine. As a result, rare-gas purifiers in Ukraine have been running at a fraction of full capacity. At the same time, sanctions have limited exports from Russia. The drop in supply caused a surge in wholesale prices, particularly of xenon, which went from $15 a litre in 2020 to more than $100 in mid-2022.

In response, chipmakers drew on their rare-gas reserves and invested in technology that enables recycling. Other buyers cut usage or switched to alternatives. Xenon is sometimes used as an anaesthetic, for example, but less so if the price is high, when it is replaced by gases including nitrous oxide. Other gases, such as argon or nitrogen, can be used in place of krypton in triple-glazed windows. Krypton and xenon are used as propellant in satellite thrusters, but the latest Starlink satellites launched by SpaceX now use argon instead.

Retrofitting air-separation plants with taps that allow rare-gas mixtures to be extracted is costly and halts production for two or three months. But new plants are being built with the taps installed, which will increase future supply. Meanwhile, Russia diverted exports to China, which then had a surplus, and began exporting its own production. In Japan, says Koizumi Yoshiki, president of *Gas Review*, an industrial-gas journal, efforts are under way to boost domestic production through a mixture of retrofitting and new plants. South Korea, another chipmaking hub, aims to become self-sufficient in rare gases in the next couple of years, notes Mr Raquet.

Collectively, these efforts to reduce consumption and boost supply have stabilised the market. Prices have fallen from their highs; a litre of xenon now costs around $45. Media coverage of the warnings helped, says Dan Hutcheson of TechInsights, a consulting firm. Along with rising prices, it delivered a "one-two punch", he notes, that spurred companies to take rapid action. At the same time, demand fell. By mid-2022 it was clear that the chip shortage was turning into a glut.

Supply chains have been reinforced and suppliers diversified, meaning the rare-gas industry is now much less vulnerable to geopolitical risk. Companies of all kinds have been paying more attention to their supply chains lately, in response to upsets caused by trade disputes, covid-19 and the war in Ukraine. Firms make the headlines when they fail to cope with disruption. As the rare-gas industry shows, few people notice when they succeed. ■

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Losing its bite

Which countries have escaped the middle-income trap?

Progress is more noticeable in the Gulf than Africa

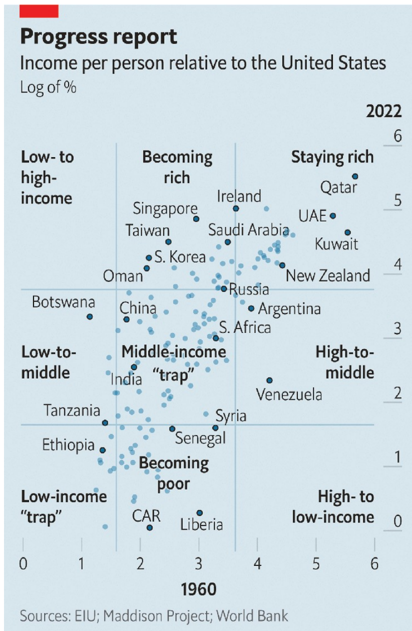
Mar 30th 2023 | Hong Kong



OVER THE past half-century, many promising economies have become ensnared in middle-income mediocrity. To help its biggest client avoid this fate, the World Bank published a flagship report ten years ago entitled "China 2030". The publication warned of the "middle-income trap", a term to describe the phenomenon. "Of 101 middle-income economies in 1960, only 13 became high-income by 2008," it claimed. This striking statistic was illustrated with a chart similar to the one below. A decade later, how has the picture changed?

Answering the question depends on the definition of middle-income employed. According to the World Bank's official classifications, a country becomes high-income only when its GDP per person exceeds around $13,200. By that standard, China looks set to escape the middle-income trap in a year or two. But for the purposes of the "China 2030" chart, the bank adopted a more stringent definition: middle-income countries have a GDP

per person, at purchasing-power parity, of between roughly 5% and 43% of America's.



The Economist

The "China 2030" chart drew on historical GDP statistics prepared by Angus Maddison, an economist. His colleagues and successors have since revised and updated the estimates to 2018. We have further updated them to 2022 using figures from the Economist Intelligence Unit, our sister organisation.

The result is that 23 countries which were middle-income in 1960 now qualify as high-income—more progress than one might have expected over the past difficult decade. Graduates include three countries in the Gulf (Bahrain, Oman and Saudi Arabia) and six members of the EU (Croatia, Cyprus, Hungary, Malta, Poland and Slovenia). Malaysia has joined the Asian tigers in the high-income bracket. The Seychelles, an island nation off Africa, has also crossed the threshold. Unfortunately, two other countries in the region, Equatorial Guinea and Mauritius, which were considered high-income in 2008, have moved in the other direction.

The list could in fact be expanded further. Seven countries that are now high-income by the "China 2030" definition did not exist as sovereign nations in 1960, so do not appear on the chart. These include the Czech and

Slovak republics, as well as several former members of the Soviet Union: Estonia, Kazakhstan, Lithuania, Latvia and Turkmenistan.

The country that once dominated them, Russia, also moved from middle-income in 1960 to high-income in 2022. Its economy has withstood Vladimir Putin's war better than expected. Yet its GDP per person could fall below the high-income threshold this year. A Russian reformer once quipped that his country had been trapped in middle-income for two centuries. Mr Putin is doing his best to return it to that state.■

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Free exchange

China is now an unlikely safe haven

The country's financial risks are its own. America's quickly become everybody else's, too

Mar 30th 2023



FINANCIAL CRISES ruin and reallocate wealth. They also reallocate worry. Investors find themselves agonising about things they never used to fret about. Worse, they fret about things they never used to think about. One example is money in the bank. The collapse of Silicon Valley Bank (SVB) in America has made depositors newly familiar with the nature and limits of claims they previously took for granted.

America's worries have quickly spread elsewhere, too. Emerging-market investors, for example, have begun to rethink the countries in which they invest, scrutinising them through SVB-tinted spectacles. They are wondering which markets are most exposed to financial jitters and slower growth in America, and which share similar vulnerabilities. What countries, for example, are suffering from stubborn inflation, rapid monetary tightening and sharp drops in bond prices? And where in the developing world do depositors look a bit flighty? Through this lens, one emerging market looks

surprisingly robust. Whisper it, but could China offer a safe haven to global investors in a time of banking turmoil?

On the face of it, the question is absurd. Only a year ago prominent voices were calling China "uninvestible". Anyone venturing their money in the country must worry about a new cold war between China and its most important trading partners. That includes the prospect of crippling financial sanctions and suffocating export controls on China's most sophisticated firms.

Needless to say, the country poses home-grown dangers as well. Uncreditworthy property developers remain a financial concern. The Communist Party's campaign against inequality has terrified its best-known entrepreneurs and wealthiest families, many of whom are eager to move money out of the country. The appearance of Jack Ma, founder of Alibaba, in his home town this week perhaps offers some reassurance. But in a normal country investors do not crave visual proof that the nation's most celebrated entrepreneur is welcome in his homeland.

China also has banking vulnerabilities of its own. Smaller regional lenders, including more than 120 city commercial banks and thousands of rural lenders, are not as robust as the rest of the system. They struggle to compete with bigger banks for deposits and find it hard to resist pressure from local governments to lend to white elephants. Investors must also remember the country's approach to covid-19. Policymaking managed to be both obstinate and capricious, inflexible and unpredictable.

And yet China has several macroeconomic and financial peculiarities that look like strengths in the current turmoil. The eccentric commitment to the country's zero-covid policy has thrown its economic cycle out of sync with the rest of the world. It thus represents a natural "growth hedge", according to Xiangrong Yu, Xinyu Ji and Yuanliu Hu of Citigroup, a bank. China may be the only big economy that grows faster this year than last, they point out. This means the growth gap between China and America could widen to five percentage points, according to the Economist Intelligence Unit, our sister company.

These same pandemic restrictions also kept a lid on price pressures. Consumer prices rose by only 1% in February, compared with a year earlier, a number that would seem to belong to a lost era in much of the world. China is the land that inflation forgot. Thus its central bank has not felt compelled to raise interest rates in a hurry. Indeed, it eased policy in March, cutting reserve requirements by 0.25 percentage points for most banks.

Bond prices did wobble during the chaotic abandonment of the zero-covid policy. But in China, unlike in America, Europe or most emerging economies, yields remain lower now than at the end of 2020. Moreover, instead of triggering a run on the banks, the bond sell-off accelerated a run into them. People who lost money on wealth-management products, which invested in bonds, fled into deposits. The economists at Citi reckon that household deposits now exceed pre-pandemic trends by 15.4trn yuan ($2.2trn).

China is not only at a different stage of the business cycle; it is also at a different stage in the financial cycle of fear and complacency. SVB's swift collapse was so damaging partly because it was so unexpected. In China the dangers posed by regional lenders are well understood, representing grey rhinos not black swans.

China's regulators are now in a cautious mood, rather than a hawkish one. They are aware of financial risks faced by regional banks but keen not to precipitate them. If another regional lender gets into trouble, they may show more forbearance than they have previously displayed. The authorities will not want to let anything interrupt an economic recovery that is still only a few months old. The central government "will likely do everything it can to evince an aura of stability", writes Houze Song of MacroPolo, a think-tank, even if that requires "quiet, below-the-radar bail-outs" of some vulnerable borrowers. This offers an attractive window for investors. The authorities are neither blind to banking risks nor inconveniently keen to crystallise them in the immediate future.

Both sides of the great wall

Even the new cold war may not undermine the case for China as a hedge. In the Asia-Pacific region, the country's onshore stocks are already among the

least sensitive to American growth or financial conditions, according to Goldman Sachs, a bank. America's efforts to decouple from China and China's offsetting efforts to encourage self-reliance could untether the market's fortunes from America still further. That will weaken China's efficiency but increase its resilience. The country will become a less attractive source of growth but a more useful source of diversification.

China has risks of its own. But that is the point. China's financial risks are its own, whereas America's quickly become everybody else's, too. Risks with Chinese characteristics could offer some respite from risks with global characteristics. ■

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Science & technology

- **[Better camouflage is needed to hide from new electronic sensors]**
- **[Russian hackers are preparing for a new campaign in Ukraine]**
- **[More evidence that animals reduce childhood allergies]**

Hyperspectral camouflage

Better camouflage is needed to hide from new electronic sensors

A deadly game of hide and seek

Mar 29th 2023



CAMOUFLAGE RANKS highly among the arts of war. Thanks to innovations such as fractal colouration patterns, which mimic nature by repeating shapes at different scales, the distance from which naked eyes can quickly spot soldiers wearing the best camouflage has shrunk, by one reckoning, by a fifth over the past two decades. That is impressive.

On today’s battlefields, however, it is no longer enough to merely hide from human eyes. People and kit are given away as well by signals beyond the visual spectrum, and devices that detect these wavelengths are getting better, lighter and cheaper. Thermal sensors are a case in point. Today, one that costs about $1,000 and weighs as little as five sachets of sugar can, in good weather, detect a warm vehicle as far off as 10km.

As Hans Kariis, deputy head of signatures research at the Swedish Defence Research Agency, notes, that is well beyond the range at which a small

drone would be spotted. Two decades ago, he adds, a less sensitive thermal sensor weighing a kilogram cost ten times as much.

For forces in Ukraine keen to go unnoticed, the challenge is not just that precision sensors are multiplying, on land, in the skies and in orbit. It is also that better automatic target-detection software is helping operators find needles in the haystacks of data being collected.

Look out!

For example, software called Kestrel, developed by Sentient Vision Systems of Melbourne, Australia, scans feeds of visual, infrared and radar data, and places red boxes around people and other potential targets, even as their positions in the frame move. Sentient says Kestrel has been deployed on more than 3,500 crewed and uncrewed aircraft since its introduction in 2009. The pertinent data processing, which also classifies objects and calculates ranges, can be done aloft—a bonus, for an aircraft may collect more data than can be streamed to computers on the ground.

As Maksym Zrazhevsky, an analyst with Molfar, an intelligence firm in Dnipro, Ukraine, observes, the fighting in his country shows how these advances have made it far harder to camouflage military assets. This no doubt helps explain why, as Mr Zrazhevsky notes, Russian forces in Ukraine have resorted to using sections of timber to disguise military refuelling vehicles as civilian logging lorries. However clever that may seem, there's a rub. The 1949 Geneva Convention on warfare bans "the feigning of civilian, non-combatant status", as Article 37's "Prohibition of perfidy" puts it.

But there is a different, convention-compliant approach to reducing the chance of appearing in an enemy's cross-hairs. Rather than make targets seem civilian, design special camouflage that tricks electronic sensors as well as human eyes.

One developer of such "multispectral" camouflaging is Saab, a Swedish industrial giant. Its Barracuda unit sells camouflage netting for vehicles and soldiers that reduces both radar reflections and heat signals. To handle radar, it contains a layer of specially crafted (but secret) semi-conducting polymers that absorb a portion of the incoming beam. That stops reflections revealing

tanks and other military gear underneath. Formulating the polymer is tricky, says Johan Jersblad, a senior camouflage engineer at Saab. If it is too conductive, the netting itself will appear on a radar screen and become a target.

Saab's nets' heat-signature reduction comes from an insulating material, also of undisclosed composition, which reflects infrared radiation from what it is covering back towards its source, be it an engine, a gun or a body. To better fool soldiers or software scanning thermal imagery, the material also reflects cooler wavelengths emitted by surroundings like the ground and vegetation—in effect, stealing their temperature from them. The material in question is distributed unevenly, to mimic heat variation in the natural world. Dr Kariis reckons today's multispectral camouflage cuts in half the range at which an asset can be spotted by many sensors.



A poncho and a cloak

Multispectral camouflage nets are typically reversible—with a different pattern, chosen from a range that includes snowfield, desert, urban, woodland and the like, on each side. The netting is not unduly heavy. A poncho called Noa lite, developed by Fibrotex, an Israeli firm that supplies America's army, weighs less than 700g. To create a covering for an

observation post, the ponchos can be attached to each other, or a single one, hung up, can shield a soldier (see picture).

Producers keep price lists close to their chests, but the products cost enough to be deployed only sparingly on Ukraine's battlefields. Mr Zrazhevsky notes, for example, that multispectral netting called Nakidka, a product of NII Stali, a Russian firm, is usually used only for high-end kit, like T-90M tanks and mobile Iskander missile launchers. Ukraine is also short of multispectral camouflage, says a colonel in Kyiv, who prefers to remain anonymous. With insufficient ponchos for even snipers and special forces, some soldiers, he says, are attempting to buy their own.

A flaky design that isn't

Other approaches to reducing soldiers' heat signatures are in the works. With money from America's Air Force Office of Scientific Research, and from DARPA, a research agency of that country's defence department, a team at the University of California, Irvine is designing infrared camouflage by embedding tiny metal flakes into thin sheets of rubber. These sheets can then be incorporated into clothing.

One design employs copper, the flakes being about a tenth of a micron thick and a few tens of microns in diameter. These reflect body heat inwards. Another uses similarly sized flecks of aluminium with surfaces wrinkled into ridges. These ridges scatter infrared emissions in different directions, blurring a heat source's shape.

Both designs would add but a trivial amount of weight to military fatigues, notes Alon Gorodetsky, a professor of chemical and biomolecular engineering at Irvine, who leads the project. The technology, he says, could be ready within a few years. Such materials, he adds, might also be used as insulation for the better control of heat flows in electronics.

A different sort of infrared camouflage, called an "appearance modulation" system, is being developed for military vehicles, by BAE Systems, a British defence contractor, with money from the Swedish Defence Materiel Administration. Adaptiv, as it is dubbed, draws electricity from a fighting vehicle to cool, rapidly, sheets of hexagonal "pixels", each somewhat larger

than a hand, which are affixed to it. The pixels' temperatures are individually adjustable.

In "blending mode", Adaptiv uses data from an infrared camera to match itself to the temperatures of nearby objects. Operators can also select among pre-programmed patterns in an image library. As BAE Systems points out, this is to allow them to make a military vehicle appear in thermal imagery to be another object, such as a car or lorry. Some reckon that could fall foul of the Geneva Convention's passing-off prohibition. (BAE declined a request for an interview.) At any rate, the firm says the technology, which has been demonstrated on a CV90 armoured vehicle, could enter production in two years' time.

Adjustable visual camouflage is also in the works. With €700,000 ($700,000) from the European Defence Agency, an arm of the European Union, a research outfit called TNO in the Netherlands has designed battery-powered sniper suits that have some 500 light-emitting diodes (LEDs), each half a centimetre in diameter, embedded in their fabric. The system uses data from a helmet camera and a light sensor to change automatically the colour and luminosity of the LEDs to match the wearer's surroundings. Maarten Hogervorst, a researcher on the project, describes the suit as "a Harry Potter cloak".

Wilder things, even more deserving of Dr Hogervorst's description, are in the pipeline. Hyperstealth Biotechnology, a firm in Maple Ridge, British Columbia that has designed some 15,000 camouflage colouration patterns for more than 50 countries, is now making objects appear invisible. Its "Quantum Stealth" system uses translucent plastic sheets with rows of elongated lenses called lenticules. Sticking two sheets of these together so that the lenticular ridges in one are aligned with the troughs in the other causes destructive interference. This stops light reflected from an object close to the sheets reaching an observer on the other side, while transmitting that from objects somewhat farther away, in the background.

The illusion, though imperfect, is startling. According to Guy Cramer, the company's founder, the system also works at infrared wavelengths. A national-security agency of America's government that prefers to remain unnamed has purchased the material for testing.

Exciting as these advances are, it remains to be seen which will prove most effective, or even practical, on tomorrow's battlefields. Sensors, too, are improving in ways that Dr Jersblad calls "scary stuff" for camouflage technologists. The threat from radar, for example, which had been fairly constant for a couple of decades, has risen sharply in recent years. Dr Jersblad points to satellite-based synthetic-aperture-radar (SAR) imagery supplied to Ukraine by ICEYE, a firm in Espoo, Finland. This permits users (who include Ukraine's armed forces) to observe, from orbit and through cloud and even light foliage, objects just half a metre in diameter. New SAR systems for drones promise higher resolution.

Look natural

A greater threat still may be hyperspectral sensors. These use sophisticated data processing to map not just objects' shapes, but also their composition—be that foliage, fabric or metal. Giorgio Licciardi, an expert on collecting hyperspectral data from orbit at the Italian Space Agency, in Rome, says the technology even detects buried anti-tank mines. (Soil on top of them is typically drier.) Officials are tight-lipped about use of hyperspectral data for fighting in Ukraine, he and others note, but no one doubts that its role will grow.

What, then, might be next? In an age in which hyperspectral sensors are identifying materials over broad areas, it will not suffice, Dr Jersblad says, "to look like nature anymore—you have to *be* nature". His lab has therefore acquired a hyperspectral sensor. Their plan is to design camouflage systems that incorporate the actual organic and inorganic materials found in places over which armies might fight. ■

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Cyber-warfare

Russian hackers are preparing for a new campaign in Ukraine

A spring cyber-offensive is about to be unleashed

Mar 29th 2023



RUSSIA'S CYBER-OFFENSIVE last year was fast, furious—and underwhelming. In it, hackers conducted perhaps the largest ever assault on computer networks. Ukraine, well-prepared and supported by foreign tech companies and allies, parried many of these blows, keeping communications and crucial government services online against all expectations. But the cyberwar, like the physical one, is evolving.

Russian cyber-forces, portrayed as lumbering bumblers, have in fact adapted to circumstances, argues Dan Black, who served in NATO's cyber-threat analysis branch until December and now works for Mandiant, a cyber-security firm within Google. During its offensive in eastern Ukraine between April and July, Russia expanded its cyber-operations in Poland and eastern Europe to collect intelligence on arms shipments to Ukraine. The GRU, Russia's military-intelligence agency, began using more malware from criminal markets to augment fancier home-made tools.

In a paper for the IISS, a think-tank, Mr Black says Russian forces showed signs of “a more prepared and reinvigorated cyber-programme” from October, during Ukrainian offensives in the south and east. That included heightened cyber-attacks against energy, water and logistics targets in parallel with drone and missile strikes on Ukraine’s power grid. This pointed to a co-ordinated strategy to ratchet up cross-domain pressure, he argues. A report published by Ukraine’s main cyber-security agency on March 8th showed that “critical” and “high-severity” cyber-incidents, the two most serious sorts, leapt in December, reaching the highest level since the first week of the war.

That pressure is still building. On March 15th Microsoft Threat Intelligence, which monitors Ukrainian networks, warned that the GRU was “preparing for a renewed destructive campaign”, including reconnaissance against important targets. Its deployment of “wiper” malware, which destroys data, was “reminiscent of the early days of the invasion”. Between January and mid-February hackers working for all three main Russian intelligence services tried to penetrate government and military targets in 17 European countries, paving the way for either espionage or disruption—access to a network allows both.

Russian cyber-doctrine also puts a premium on information warfare. In November a website began publishing private messages from two senior officials in Moldova—a classic “hack-and-leak” operation akin to the one the GRU conducted ahead of America’s presidential elections in 2016. On March 10th the White House publicly accused Russia of trying to foment a coup in Moldova. Recent Russian propaganda has also spread false claims that Ukrainian refugees abroad were being extradited and conscripted into Ukraine’s army.

Russia’s army is exhausting itself in crude and costly ground assaults across eastern Ukraine. It has little offensive potential left. But it is easier to execute cyber-attacks than raise new battalions.

Some sophisticated operations are only just coming to light: Microsoft recently revealed that Russia had been using a “zero-day” vulnerability—one that is previously unknown and thus impossible to patch—for over a year until it was disclosed in mid-March. The vulnerability was used not just

against Ukraine, but also government, military, energy and logistics sectors in Poland, Romania and Turkey. "European energy security and logistics are in the cross-hairs," warns Mr Black, "and these priorities aren't fading away."

Ukraine needs continuous cyber-aid as much as a steady supply of shells. On February 22nd Dutch spy agencies warned that Ukraine's staunch defence could "probably only be sustained as long as Western support remains as intensive and adaptive as the cyber-operations of the Russian intelligence services." Mr Black agrees. "The reality is that the war is not over," he writes. "Interactions between offence and defence could still change as Russia continues to learn from its early shortcomings." ■

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The hygiene hypothesis

More evidence that animals reduce childhood allergies

Except for hamsters, which make things worse

Mar 29th 2023



THE PROBLEM with a catchy name is that sometimes it catches on too well. Take the hygiene hypothesis, outlined in 1989 by David Strachan of St George's, a hospital and medical school in London. It suggests that the rise of allergenic sensitivity observed in rich countries over the course of the 20th century may have been caused by a corresponding decline in childhood infections, and also by a shift from rural to urban living, so that children are no longer routinely exposed to farm animals.

Dr Strachan's work still has much to recommend it. What the catchy label has fostered, however, is an erroneous belief that cleanliness is not necessarily a health benefit. In reality, says Thomas Marrs, a paediatric allergist at Kings College, London, hygiene is usually about bugs causing infection—and the bugs that may be beneficial are different from those which do that. But it is plain to see why alternative descriptions, such as "the

high turnover and diversity hypothesis" or "the microbial deprivation hypothesis", have not caught on, more accurate though they may be.

In an attempt to collect further data on the matter, Okabe Hisao of Fukushima Medical University and his colleagues have trawled through the Japan Environment and Children's Study, which tracked over 100,000 pregnancies between 2011 and 2014. Pursuing the animal connection, they looked for correlations between household pet ownership before and immediately after a child's birth, and any food allergies diagnosed in that child's first three years. They have just published their results in *PLOS ONE*.

Of the 66,000 or so children they chose to look at, 22% had been born into households with pets, and were thus exposed to microbes and other potential allergens from those animals both before and after birth. Children in households with dogs, the researchers found, had lower rates than average of allergies to eggs, milk and nuts. Those cohabiting with cats seemed more tolerant of eggs, wheat and soyabeans. However, children whose parents kept "turtles" (terrapins, in particular, are popular pets in Japan) appeared unaffected. And, curiously, those exposed to hamsters appeared more likely than average to be allergic to nuts.

What exactly all this means is unclear. One potentially important observation is that both pre- and postpartum exposure were needed for the observed effects to show up. Neither, by itself, was sufficient. Possibly, it is the time around birth itself which is the crucial factor, for this is when it is believed that the bulk of a child's gut flora is established.

There are confounding variables. The researchers themselves point out that pet-owning households are more likely to live in the countryside, with its other sources of immune-system-stimulating factors. And, as Dr Marrs observes, allergy-prone families are less likely to own pets in the first place. These facts, rather than the presence of companion animals, might explain at least part of the effect.

Confirming or denying this will need more study. Nevertheless, Dr Okabe's contribution is an interesting addition to the debate about Dr Strachan's brainchild. ■

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Culture

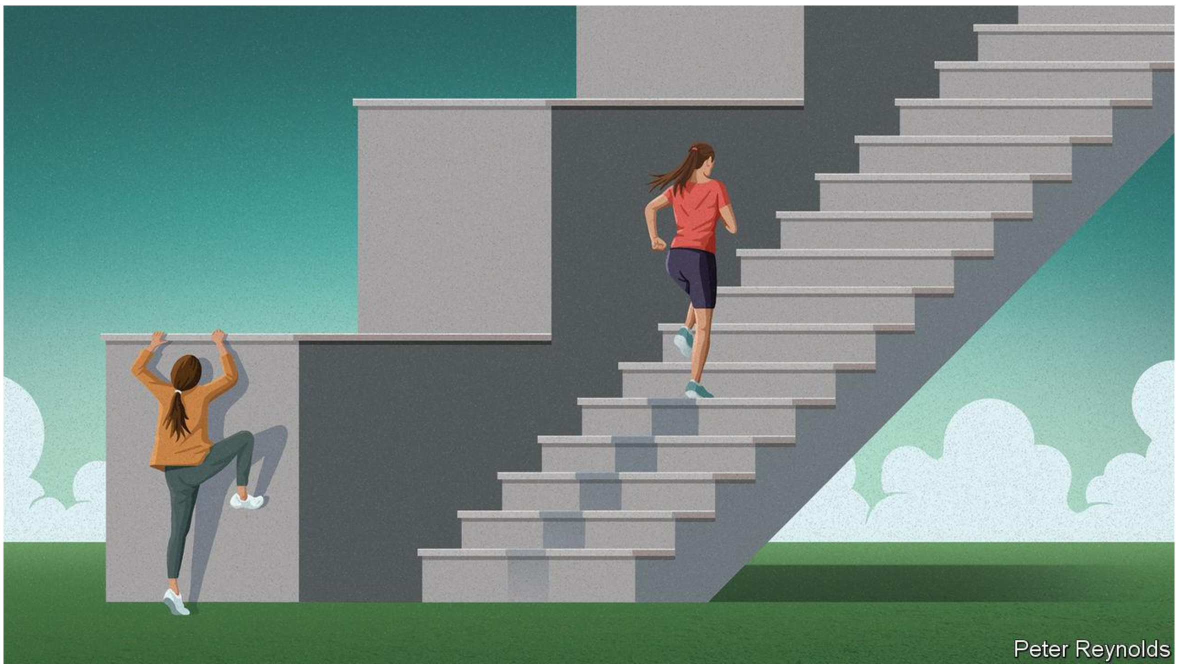
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- In exile from Egypt, Bassem Youssef is still making people laugh
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The evolution will not be televised

Why gradualists are usually right and radicals are wrong

"Gradual" makes a passionate and convincing argument for incrementalism

Mar 30th 2023



Gradual. By Greg Berman and Aubrey Fox. *Oxford University Press*; *240 pages; $29.95 and £22.99*

REVOLUTIONARIES HAVE the best slogans. The Bolsheviks shouted "Peace! Land! Bread!" Mao Zedong promised a "Great Leap Forward". Che Guevara claimed to "tremble with indignation at every injustice". Advocates of gradual change, by contrast, find it hard to compose a good rallying cry. No crowd ever worked itself into a frenzy chanting: "What do we want? Incremental reform! When do we want it? When budgetary conditions allow!"

But as Greg Berman and Aubrey Fox argue in "Gradual", incrementalism works. Revolutionaries promise paradise but often bring about bloodshed, bread lines and book-banning. Humanity has grown more prosperous by

making a long series of often modest improvements to an unsatisfactory status quo. The Industrial Revolution, despite its name, was not a single, sudden event but thousands of cumulative innovations spread across nearly a century. "Over time, incremental reforms can add up to something truly transformative," note the authors.

Both are American criminal-justice reformers, and although their argument applies globally they focus on their home country. Correctly, they observe that American politics has been flooded by what Alexander Hamilton called "a torrent of angry and malignant passions".

On the right, Donald Trump and his acolytes have sought "the ultimate in radical change": to overturn the result of a democratic election. "I am your warrior, I am your justice…I am your retribution…I will totally obliterate the deep state," Mr Trump thundered on March 4th at a supposedly "conservative" conference. As president, he cosied up to Vladimir Putin and spoke warmly of some neo-Nazis.

Some on the left, meanwhile, deem America so rotten that old structures must be swept away. "Defund the police!" "Abolish ICE [the agency that enforces immigration laws]!" The authors refer to Ibram X. Kendi, a fashionable scholar, who wants to create a "Department of Anti-racism", to be staffed by "experts on racism" with the power to veto any policy that fails to advance his definition of racial equity. They would have "disciplinary tools" to wield against public officials who dissented. This would, in effect, hand quasi-dictatorial power to a small group of people who share Mr Kendi's world-view.

Mr Berman and Mr Fox admit that radical change has sometimes been necessary: for example, to achieve the abolition of slavery. But the more cautious sort is more often effective, because "gradualists know how little they know". Anyone trying to understand a big problem is sure to miss crucial information. Errors are inevitable. Incrementalism makes it easier to correct them. New ideas can "be tested, evaluated and honed over time".

The authors cite the example of Social Security, America's public-pension system. During the Great Depression, two approaches were proposed for helping the old and hard-up. One was "radical, easy to understand and

capable of mobilising one of the largest citizen movements of the 20th century". Francis Townsend, a Californian doctor, proposed giving every American over 60 a pension of $150 a month ($3,500 in today's money), on condition that they stopped working and spent the cash by the end of the month. The idea was that by retiring early, older folk would free up jobs for younger ones; and by spending copiously, they would stimulate the economy.

So alluring was this plan that supportive "Townsend clubs" went on to enroll nearly one in five Americans over 60. Had it been enacted, it would have been a disaster. Forcing the old to retire would not have magically created more jobs, and the Townsend plan would have cost, by one estimate, "half the nation's wealth without any plausible funding mechanism".

The other plan was, in the authors' words, "slow to develop, internally contradictory, and seemed hopelessly inadequate to the urgency of the moment". President Franklin Roosevelt decided to frame his "Social Security" law of 1935 not as a handout, but as a reward for past labour. Workers chipped in via a payroll tax, and the benefits they eventually received were (very roughly) tied to their lifetime contributions. This made the programme stingy in the short run—the first benefits were not paid out for five years—but secure in the long run, because pensioners believed that they had earned their benefits "and would be furious if they were threatened".

Initially, Social Security was far smaller than other bits of Roosevelt's New Deal. It took 15 years and endless tinkering before it assumed the shape it approximately has today. Benefits to dependents and survivors were added in 1939; federal grants to help the states look after the disabled were introduced in 1950; and so on. Now it is the largest government programme in America, and so popular that pundits refer to it as the "third rail" of politics. In other words: you touch it, you die.

The tortoise and the snare

Another intriguing example is the pacification of New York. In the 1980s some New Yorkers were so terrified of violent crime that they applauded a vigilante who shot four allegedly menacing teenagers on a train. Yet within a

few decades the metropolis had become one of the safest big cities in America: the homicide rate fell by a whopping 82% between 1990 and 2009, the rate of car thefts by 93%.

For this startling turnaround, the authors credit not one big reform but what the *New Yorker* called "a thousand small sanities". Legions of new police officers were hired, and a tough oversight board weeded out the bad ones. A new data system identified crime hot spots. Cops cracked down on minor offences that created an atmosphere of lawlessness, such as fare-dodging and public urination. Businesses clubbed together to clean up neighbourhoods; NGOs offered after-school clubs for at-risk teenagers. As the number of eyes on the street grew, criminals ceased to dominate them. New York became a pleasant place to live, even as its prison population fell: specialised courts for drug offenders and the mentally ill sent more lawbreakers for treatment instead of locking them up.

Incrementalism can seem slow, Messrs Berman and Fox acknowledge, but modest changes are more likely than radical ones to earn a consensus across the political spectrum, and are less likely to provoke a backlash and wind up being reversed. They can be started sooner and, if they work, they can be continued or extended. Far from being a defence of the status quo, "incrementalism calls for ceaseless change", from the continuous improvement of a Japanese car factory to the building of America, one immigrant family at a time.

Leon Trotsky, a revolutionary, once sneered that gradualism was "boring". He helped plunge Russia into chaos, and was murdered with an ice pick. ■

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Entertaining lives

“Masquerade” depicts the darkness behind Noel Coward’s frivolity

The playwright and performer was a more serious artist than even he cared to acknowledge

Mar 30th 2023



Masquerade: The Lives of Noel Coward. By Oliver Soden. *Weidenfeld & Nicolson; 656 pages; £30*

NOEL COWARD made his acting debut on the London stage in 1911 at the tender age of 11. The production—an underwater-themed Edwardian fantasia—was not auspicious. The young actor’s doltish lines included “Crumbs, how exciting!” All the same, he tried to play the minor part of court jester with such conviction that everyone in the theatre might recognise his talent. He already seemed set on a starring role. Asked once what he wanted to be when he grew up, he replied, with great seriousness, “a success”.

“Masquerade”, a new biography of Coward by Oliver Soden, reveals how a precocious child actor from a working-class family became the highest-paid

writer in 20th-century Britain. Through playwriting, singing, acting, directing and composing—there were few art forms in which he did not excel during his six-decade career—Coward was at one time earning £50,000 a year (around £15m today). He revelled in the nickname "the Master".

A trip to Broadway in 1921, where he was electrified by the dialogue, turned him on to playwriting. In notebooks he recorded the *bons mots* he overheard on his travels and began to fashion sharp, sardonic dialogue of his own. His lines come alive on stage. During a revival in 1964 of the play "Hay Fever", Maggie Smith brought the house down simply by flicking her wrist, arching an eyebrow and drawling: "This haddock's disgusting."

For audiences in the 1920s, recovering from the first world war, Coward's early plays were a tonic. "Hay Fever" and "The Vortex" delight in the magnificent wordplay, inconsequential yet entertaining, between eccentric old aristocrats and a younger generation brought up on alcohol, drugs and jazz. These plays were Coward's way of sending up the decadence and destruction of the Roaring Twenties, when it was a virtue to be flippant and fun even in the face of tumult. As one character says in "Private Lives", Coward's hit play of 1930, you had to "laugh at everything".

Critics often dismissed his comedies as light and unintellectual, but so long as they were doing well at the box office, Coward's main concern was the accumulation of property. Goldenhurst, an Elizabethan farmhouse in Kent, was his largest and most lavish purchase. He used the fortune he made in the West End and on Broadway to transform it into a plush estate enjoyed by his mother, Violet, to whom he felt indebted for his success.

Male lovers came and went, but he clung to a group of friends with lives as glamorous as his own. Gladys Calthrop designed the costumes for many of his plays; the composers Ivor Novello and Cole Porter were among his closest pals. Perhaps no one was more devoted to Coward than Cole Lesley. First employed as his valet in 1936, Lesley managed to weather Coward's vicious moods and bleak depressions for more than 35 years.

When the second world war erupted, it unleashed in the writer a burst of nationalism which, in Mr Soden's account, made him snobbish and petulant.

Through his friendship with Winston Churchill, and in spite of his lack of experience or training, Coward managed to bag a top job in the Secret Service. The Nazis put him on their list of British residents who were to be arrested—and presumably executed—in the event of a German victory. But this employment was abruptly terminated, in part due to growing impatience with Coward's flamboyant lifestyle. The success of his play "Blithe Spirit" (1941), performed as bombs whistled overhead, did not lessen his resentment. He sent a flurry of peevish letters to Whitehall.

With age, Coward became embittered about post-war Britain. To avoid paying tax, he decamped to his seven-acre estate on the Jamaican coast, where he painted landscapes and reminisced about the empire with guests including Churchill and Ian Fleming. His views on the new welfare state and Indian independence were stubbornly reactionary.

Yet old age also emboldened his defence of homosexuality. Using recent archival discoveries, Mr Soden highlights Coward's opposition to its criminalisation, which he called "stupid and quite barbarous". An unpublished letter reveals that in 1960 he planned a daring but unfinished play about a male love triangle; later he drafted several scenes for a play confronting the deep-rooted nature of homophobia. Had either been produced, it would have made history as the first depiction of homosexual desire on a British stage.

These days his plays are often regarded as frivolous and outdated. Mr Soden finds in them a seriousness that their original audiences failed to see—and that even Coward, guarding his reputation as a light entertainer, may have preferred to gloss over. Return to his work after reading Mr Soden's illuminating biography, and it is striking how often his sparkling wit seems shadowed by despair. "Is he happy, do you think? I mean really happy?" someone asks of Garry Essendine, a character in "Present Laughter" (written in 1939). Essendine, a thinly veiled self-portrait, responds with rare candour: "There's something awfully sad about happiness, isn't there?" ■

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“Killing Thatcher” tells the full story of the Brighton bombing

Rory Carroll recounts the IRA plot to assassinate the prime minister in 1984 and the ensuing manhunt

Mar 30th 2023


REX Shutterstock

Killing Thatcher. By Rory Carroll. *Mudlark; 416 pages; £25*

JUST AFTER midday on September 15th 1984, a neatly dressed young man carrying an unusually heavy suitcase walked up to the reception desk of the Grand Hotel in Brighton and asked for an upper-floor room with a sea view. The smiling receptionist offered him room 629. All he had to do now was fill in the registration card with his false name and an address in London, and avoid leaving any fingerprints. By a stroke of luck, 629 was one of the rooms that best suited his plan: to plant a bomb with a long-delay timer that would detonate in the early hours of the morning 27 days later—and kill Britain’s prime minister and much of the cabinet.

The engineers of the Irish Republican Army (IRA) had calculated that, if positioned correctly, the bomb would bring down the giant chimney stack of

the Victorian hotel, so that it would topple through the blast hole and slice through the building. The chimney would take with it a vertical stack of rooms with numbers ending in 9—including the Napoleon Suite, in which Margaret Thatcher, the prime minister, would be staying as she prepared to address the Conservative Party conference that same day.

The plan almost worked perfectly. But the chimney stack veered slightly, destroying the rooms with numbers ending in 8. Those ending in 9 were merely clipped. The bomb killed five people and injured 34, many of them grievously, including two cabinet ministers, Norman Tebbit and John Wakeham, whose wife, Roberta, was among the dead. The prime minister survived with barely a scratch and insisted on giving her conference speech, as intended, later in the day. Meanwhile, the bomber, Patrick Magee, was 500 miles away, holed up across the Irish Sea in Cork, glued to the radio for news.

Rory Carroll, a Dubliner who reported from Belfast in the mid-1990s, when Northern Ireland's Troubles were winding down—and is now the *Guardian*'s Ireland correspondent—has knitted together an impressive array of sources to tell, for the first time, the complete story of the plot to kill the British leader. He chronicles, too, the hunt to identify and then catch Mr Magee and his accomplices.

Mr Carroll's account is entirely factual, but it slips somewhat uneasily between a documentary style and a thrillerish one. He leans a little too heavily on descriptions of the weather to create a sense of immediacy. He also feels obliged to provide rather plodding context for readers who may be unfamiliar with Northern Ireland's peculiar status, the origins of republican violence or what made Thatcher such a remarkable yet controversial leader.

Moreover, some readers may be unsettled by his scrupulous even-handedness in detailing the motives and actions of terrorists and those attempting to save lives by thwarting them. He is ambivalent about two of his main characters. One is Gerry Adams, the calculating president of Sinn Féin, the IRA's political wing: a brooding, manipulative presence who is the epitome of strategic patience. The other is Thatcher herself, who refused to be pressured by hunger strikers in the Maze prison into granting IRA inmates "special category status". Ten of them died. This, above all, made

the IRA seek revenge against a woman they saw as a cruel and implacable foe.

But the author's admiration shines through for the heroic police bomb-disposal specialists in his narrative, such as Peter Gurney and Ken Howorth (who was killed in the basement of a London hamburger bar in 1981). The same goes for the painstaking work of ordinary detectives and a brilliant forensic scientist, David Tadd, who eventually matched Mr Magee to the hotel registration card.

Nor does Mr Carroll spare readers the horror of the lives truncated or wrecked by the IRA's bombing campaign. His mostly gripping tale is a reminder of a time, before the rise of Islamist terrorism, when random bombings seemed routine in Britain, and every so often the IRA would pull off a grisly "spectacular". The book opens on the awful August day in 1979 when the terrorists blew up Earl Mountbatten's family boating party and killed 18 British soldiers in an ambush in Northern Ireland. Three years later, in July 1982, the IRA's "England Department" matched that with same-day bombings in Hyde Park and Regent's Park, killing 11 soldiers and leaving indelible images of eviscerated horses lying in the road.

As the 25th anniversary nears of the Good Friday Agreement, which brought a fragile peace to Northern Ireland, the book is a warning to those prepared to play fast and loose with its terms. Paradoxically, the reckless mendacity of Boris Johnson, the former prime minister, over the impact of Brexit on Northern Ireland, and the self-harming intransigence of the Democratic Unionist Party on that and other issues, have done more for the prospects of a united Ireland than IRA bombing ever did. ■

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Laughter in the dark

In exile from Egypt, Bassem Youssef is still making people laugh

A pioneer of political satire in Arabic has become an English-speaking stand-up comic

Mar 30th 2023



Courtesy of Bassem Youssef

AS BASSEM YOUSSEF, an Egyptian comedian, sauntered onto the stage at the Royal Festival Hall in London on March 9th, members of the audience filmed his entrance. No matter that they had been told repeatedly to put their phones away. "You guys just don't listen to instructions," chastised Mr Youssef. "It's because of people like you we don't get visas here."

The largely Egyptian audience roared with laughter. For many of the punters at his show, Mr Youssef is an icon. He was one of the first people in the Arab world to host a political-satire show on television. A decade ago, during his Friday-night slot, generations of Egyptian families would huddle round screens to watch him; the streets of Cairo fell silent. Here, in a prestigious auditorium in London, things were different. Mr Youssef, known for his tongue-in-cheek Arabic humour, was performing almost entirely in English.

His career in comedy began in 2011, during the Arab spring. Previously a heart surgeon, Mr Youssef began filming political satire in his laundry room and posting it to YouTube. He was funny—dangerously funny. A big television network snapped him up and broadcast his show, "The Programme". At its peak it had between 30m and 40m viewers each week, more than a third of Egypt's entire population.

During the presidency of Muhammad Morsi, a democratically elected Islamist, Mr Youssef enjoyed relative freedom. He was detained only once—for "disrupting the fabric of society", among other supposed offences. Mr Youssef's description of this event makes it seem fairly benign. Wielding transcripts of his show, he remembers, officers questioned him about each gag in turn, laughing as they did so.

In 2013 Abdel-Fattah al-Sisi came to power in a coup. The military dictator did not consider satire a laughing matter, particularly when the jokes were on him. Mr Youssef's humour was blocked from the airwaves; he received death threats. Eventually he fled, making his way to America.

He did not know what he would do next, he says now. "The Programme" had been a product of those brief years of revolution. A version of the show made in exile would be a pale replica of the original. In the end he decided on a complete reinvention. Four years ago, he set out to become an English-speaking stand-up comedian.

Doctor, doctor

It wasn't easy. A new language came with new cultural references, and at its own pace. "I discovered that the hard way," recalls Mr Youssef. "There were nights when I did terribly [on stage] because I couldn't find that rhythm." But he has now mastered his craft. The acutely observed material in his new show, "Adam"—now bound for New York after a European tour—is a culmination of those laborious years.

Besides the language of its delivery, "Adam" differs from Mr Youssef's revolution-era comedy in two main ways. The first is its purpose. When he began wisecracking in 2011, he hoped his jokes would serve as a remedy to fear in febrile times. Now his aim is to illuminate the experience of the Arab

diaspora in the West (taking friendly jabs at stereotypical Egyptian behaviour along the way). "In America we are a newer group of immigrants, compared to Asians or Latinos," he explains. "It's important that we tell our stories, instead of just talking to each other."

The second change is his newly direct style. On "The Programme", Mr Youssef mostly relied on insinuation for his punchlines. He pushed the envelope, but didn't tear it up altogether. In "Adam" he is no longer burdened by taboos, political or otherwise. Now he is outrageously frank. Topics that in the past he approached only delicately—specifically politics, sex and religion—are tackled head-on. Dictators in the Middle East are "assholes". Watching pornography in America is much better than back home because "in Egypt our internet is so bad it qualifies as a reason to apply for asylum."

For all that, one thing remains the same: Mr Youssef's life in America is still bound by limitations, albeit of a different kind from the old constraints in Egypt. To illustrate that point during the show, he tells the story of an Arabic-speaking woman who was detained at an airport for saying the word *inshallah* ("God willing") on the phone before boarding a plane. In practice, he explained to the non-Arabic-speaking listeners in the room, *inshallah* means "it's never going to happen" (the Arabs in the audience chuckled knowingly at this paraphrase).

Along with some experiences of his own, this anecdote made Mr Youssef realise that, to some extent, he would still have to police his own behaviour in the "free world". The only place he does not have to do this is on stage. Will he ever escape such strictures? There is hope, he says. But with a caveat: "Inshallah." ■

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Johnson

ChatGPT is a marvel of multilingualism

It may make things up, but it does so fluently in more than 50 languages

Mar 29th 2023



THE HYPE that followed ChatGPT's public launch last year was, even by the standards of tech innovations, extreme. OpenAI's natural-language system creates recipes, writes computer code and parodies literary styles. Its latest iteration can even describe photographs. It has been hailed as a technological breakthrough on a par with the printing press. But it has not taken long for huge flaws to emerge, too. It sometimes "hallucinates" non-facts that it pronounces with perfect confidence, insisting on those falsehoods when queried. It also fails basic logic tests.

In other words, ChatGPT is not a general artificial intelligence, an independent thinking machine. It is, in the jargon, a large language model. That means it is very good at predicting what kinds of words tend to follow which others, after being trained on a huge body of text—its developer, OpenAI, does not say exactly from where—and spotting patterns.

Amid the hype, it is easy to forget a minor miracle. ChatGPT has aced a problem that long served as a far-off dream for engineers: generating

human-like language. Unlike earlier versions of the system, it can go on doing so for paragraphs on end without descending into incoherence. And this achievement's dimensions are even greater than they seem at first glance. ChatGPT is not only able to generate remarkably realistic English. It is also able to instantly blurt out text in more than 50 languages—the precise number is apparently unknown to the system itself.

Asked (in Spanish) how many languages it can speak, ChatGPT replies, vaguely, "more than 50", explaining that its ability to produce text will depend on how much training data is available for any given language. Then, asked a question in an unannounced switch to Portuguese, it offers up a sketch of your columnist's biography in that language. Most of it was correct, but it had him studying the wrong subject at the wrong university. The language itself was impeccable.

Portuguese is one of the world's biggest languages. Trying out a smaller language, your columnist probed ChatGPT in Danish, spoken by only about 5.5m people. Danes do much of their online writing in English, so the training data for Danish must be orders of magnitude scarcer than what is available for English, Spanish or Portuguese. ChatGPT's answers were factually askew but expressed in almost perfect Danish. (A tiny gender-agreement error was the only mistake caught in any of the languages tested.)

Indeed, ChatGPT is too modest about its own abilities. On request, it furnishes a list of 51 languages it can work in, including Esperanto, Kannada and Zulu. It declines to say that it can "speak" these languages, but rather "generates text" in them. This is too humble an answer. Addressed in Catalan—a language not on the list—it replies in that language with a cheerful "Yes, I do speak Catalan—what can I help you with?" A few follow-up questions do not trip it up in the slightest, including a query about whether it is merely translating answers first generated in another language into Catalan. This, ChatGPT denies: "I don't translate from any other language; I look in my database for the best words and phrases to answer your questions."

Who knows if this is true? ChatGPT not only makes things up, but incorrectly answers questions about the very conversation it is having. (It has no "memory", but rather feeds the last few thousand words of each

conversation back into itself as a new prompt. If you have been speaking English for a while it will "forget" that you asked a question in Danish earlier and say that the question was asked in English.) ChatGPT is untrustworthy not just about the world, but even about itself.

This should not overshadow the achievement of a model that can effortlessly mimic so many languages, including those with limited training data. Speakers of smaller languages have worried for years about language technologies passing them by. Their justifiable concern had two causes: the lesser incentive for companies to develop products in Icelandic or Maltese, and the relative lack of data to train them.

Somehow the developers of ChatGPT seem to have overcome such problems. It is too early to say what good the technology will do, but this alone gives one reason to be optimistic. As machine-learning techniques improve, they may not require the vast resources, in programming time or data, traditionally thought necessary to make sure smaller languages are not overlooked online.■

Read more from Johnson, our columnist on language:
"Omit needless words!" But not all of them (Mar 16th)
If stigma is the problem, using different words may not help (Feb 16th)
Some well-known etymologies are too good to be true (Feb 2nd)

Also: How the Johnson column got its name

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Economic & financial indicators

- **Economic data, commodities and markets**

Indicators

Economic data, commodities and markets

Mar 30th 2023

Economic data

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	Gross domestic product, % change on year ago: latest		quarter*	2023†	Consumer prices, % change on year ago: latest		2023†	Unemployment rate, %	
United States	0.9	Q4	2.7	0.7	6.0	Feb	4.0	3.6	Feb
China	2.9	Q4	nil	5.7	1.0	Feb	2.1	5.6	Feb‡§
Japan	0.4	Q4	0.1	1.0	3.3	Feb	1.9	2.4	Jan
Britain	0.4	Q4	0.1	-0.3	10.4	Feb	5.9	3.7	Dec††
Canada	2.1	Q4	nil	0.8	5.2	Feb	3.4	5.0	Feb
Euro area	1.8	Q4	-0.1	0.7	8.5	Feb	5.9	6.6	Jan
Austria	2.6	Q4	-0.1‡	0.8	10.9	Feb	6.6	5.1	Jan
Belgium	1.4	Q4	0.4	0.5	6.6	Feb	5.4	5.8	Jan
France	0.5	Q4	0.3	0.5	6.3	Feb	5.0	7.1	Jan
Germany	0.9	Q4	-1.7	-0.1	8.7	Feb	6.2	3.0	Jan
Greece	4.5	Q4	5.6	1.0	6.1	Feb	4.1	10.8	Jan
Italy	1.4	Q4	-0.5	0.6	9.1	Feb	6.8	7.9	Jan
Netherlands	3.2	Q4	2.6	0.7	8.0	Feb	6.1	3.5	Feb
Spain	2.6	Q4	0.8	1.4	6.0	Feb	4.3	13.0	Jan
Czech Republic	0.1	Q4	-1.4	-0.2	16.7	Feb	11.4	2.6	Jan‡
Denmark	1.7	Q4	3.5	0.8	7.6	Feb	5.0	2.8	Jan
Norway	1.3	Q4	0.8	1.4	6.3	Feb	4.6	3.6	Jan‡‡
Poland	0.6	Q4	-9.3	0.7	18.4	Feb	13.7	5.5	Feb§
Russia	-3.7	Q3	na	-2.1	11.0	Feb	7.5	3.5	Feb§
Sweden	-0.1	Q4	-2.0	-0.6	12.0	Feb	5.6	8.2	Feb§
Switzerland	0.8	Q4	0.1	0.9	3.4	Feb	2.2	1.9	Feb
Turkey	3.5	Q4	3.8	2.8	55.2	Feb	42.2	10.3	Jan§
Australia	2.7	Q4	1.9	1.6	7.8	Q4	4.2	3.5	Feb
Hong Kong	-4.2	Q4	nil	3.4	1.7	Feb	2.4	3.3	Feb‡‡
India	4.4	Q4	-3.4	6.0	6.4	Feb	5.8	7.5	Feb
Indonesia	5.0	Q4	na	4.7	5.5	Feb	3.9	5.9	Q3§
Malaysia	7.0	Q4	na	3.5	3.7	Feb	2.3	3.6	Jan§
Pakistan	6.2	2022**	na	1.9	31.5	Feb	24.0	6.3	2021
Philippines	7.2	Q4	10.0	4.8	8.6	Feb	5.7	4.8	Q1§
Singapore	2.1	Q4	0.3	1.7	6.3	Feb	3.3	2.0	Q4
South Korea	1.3	Q4	-1.6	1.5	4.8	Feb	2.8	3.1	Feb§
Taiwan	-0.4	Q4	-1.5	1.9	2.4	Feb	1.6	3.6	Feb
Thailand	1.4	Q4	-5.9	3.8	3.8	Feb	2.5	1.0	Dec§
Argentina	1.9	Q4	-6.0	-0.2	102	Feb	90.6	6.3	Q4§
Brazil	1.9	Q4	-0.9	1.0	5.6	Feb	5.2	8.4	Jan§‡‡
Chile	-2.3	Q4	0.2	0.2	11.9	Feb	7.7	8.0	Jan§‡‡
Colombia	2.9	Q4	2.7	1.6	13.3	Feb	11.9	13.7	Jan§
Mexico	3.6	Q4	1.8	1.4	7.6	Feb	5.9	2.9	Jan
Peru	1.7	Q4	-6.0	1.9	8.6	Feb	6.5	7.0	Feb§
Egypt	4.4	Q3	na	3.0	32.0	Feb	19.2	7.2	Q4§
Israel	2.8	Q4	5.6	2.9	5.2	Feb	3.8	3.9	Feb
Saudi Arabia	8.7	2022	na	2.8	3.0	Feb	2.2	5.8	Q3
South Africa	0.9	Q4	-4.9	1.3	7.3	Feb	5.1	32.7	Q4§

Source: Haver Analytics. *% change on previous quarter, annual rate. †The Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. **Year ending June. ††Latest 3 months. ‡‡3-month moving average.

The Economist

Economic data

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	Current-account balance, % of GDP, 2023†	Budget balance, % of GDP, 2023†	Interest rates, 10-yr gov't bonds latest, %		change on year ago, bp	Currency units, per $ Mar 29th	% change on year ago
United States	-3.0	-5.2	3.6		116	-	
China	1.9	-2.7	2.7	§§	11.0	6.89	-7.5
Japan	3.0	-5.9	nil		-8.0	133	-7.4
Britain	-3.2	-5.4	3.4		166	0.81	-6.2
Canada	-1.2	-1.1	2.9		46.0	1.36	-8.1
Euro area	1.0	-3.5	2.3		169	0.92	-2.2
Austria	1.1	-3.5	3.0		199	0.92	-2.2
Belgium	-1.8	-4.9	2.9		181	0.92	-2.2
France	-1.9	-5.3	2.8		174	0.92	-2.2
Germany	3.5	-2.0	2.3		169	0.92	-2.2
Greece	-7.0	-3.5	4.3		141	0.92	-2.2
Italy	-0.5	-4.8	4.2		201	0.92	-2.2
Netherlands	6.8	-2.7	2.7		179	0.92	-2.2
Spain	0.3	-4.7	3.3		188	0.92	-2.2
Czech Republic	-1.4	-4.8	4.6		63.0	21.8	1.3
Denmark	9.0	0.5	2.6		171	6.88	-2.6
Norway	20.0	11.4	1.4		76.0	10.4	-16.9
Poland	-2.4	-2.9	6.1		86.0	4.33	-3.0
Russia	6.8	-4.4	10.8		-164	77.2	13.3
Sweden	3.0	-0.3	2.3		104	10.4	-10.8
Switzerland	6.5	-0.7	1.1		47.0	0.92	1.1
Turkey	-4.4	-3.8	10.5		-1379	19.1	-23.5
Australia	1.1	-2.1	3.3		40.0	1.50	-11.3
Hong Kong	3.5	-1.4	3.0		76.0	7.85	-0.2
India	-1.5	-5.9	7.3		48.0	82.3	-7.7
Indonesia	0.8	-2.9	6.8		2.0	15,065	-4.7
Malaysia	2.9	-5.2	4.0		2.0	4.42	-4.8
Pakistan	-3.2	-5.5	15.3	†††	339	284	-35.8
Philippines	-3.0	-6.4	6.3		33.0	54.5	-4.3
Singapore	17.2	-0.1	2.9		50.0	1.33	2.3
South Korea	2.6	-2.1	3.3		32.0	1,303	-6.4
Taiwan	11.8	-2.2	1.2		24.0	30.4	-5.5
Thailand	2.1	-2.6	2.5		3.0	34.1	-1.4
Argentina	-1.0	-3.9	na		na	208	-46.8
Brazil	-2.9	-7.9	12.9		171	5.15	-7.8
Chile	-5.1	-2.5	5.3		-120	788	-1.3
Colombia	-4.7	-4.4	11.9		223	4,624	-18.7
Mexico	-1.0	-3.7	9.0		53.0	18.1	10.3
Peru	-3.3	-1.6	7.4		67.0	3.75	-0.8
Egypt	-2.9	-6.5	na		na	31.0	-40.8
Israel	3.9	-2.0	3.7		140	3.58	-10.9
Saudi Arabia	6.5	1.6	na		na	3.76	-0.3
South Africa	-1.9	-4.5	9.8		31.0	18.1	-19.6

Source: Haver Analytics. §§5-year yield. †††Dollar-denominated bonds.

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Markets

In local currency	Index Mar 29th	% change on: one week	% change on: Dec 30th 2022
United States S&P 500	4,027.8	2.3	4.9
United States NAScomp	11,926.2	2.2	13.9
China Shanghai Comp	3,240.1	-0.8	4.9
China Shenzhen Comp	2,103.4	0.2	6.5
Japan Nikkei 225	27,883.8	1.5	6.9
Japan Topix	1,995.5	1.7	5.5
Britain FTSE 100	7,564.3	nil	1.5
Canada S&P TSX	19,837.7	1.6	2.3
Euro area EURO STOXX 50	4,231.3	0.8	11.5
France CAC 40	7,187.0	0.8	11.0
Germany DAX*	15,328.8	0.7	10.1
Italy FTSE/MIB	26,739.0	0.8	12.8
Netherlands AEX	745.5	0.5	8.2
Spain IBEX 35	9,070.7	0.7	10.2
Poland WIG	57,173.2	0.3	-0.5
Russia RTS, $ terms	1,004.6	2.5	3.5
Switzerland SMI	10,963.3	1.7	2.2
Turkey BIST	4,943.2	-1.2	-10.3
Australia All Ord.	7,236.0	0.5	0.2
Hong Kong Hang Seng	20,192.4	3.1	2.1
India BSE	57,960.1	-0.4	-4.7
Indonesia IDX	6,839.4	2.2	-0.2
Malaysia KLSE	1,420.4	0.6	-5.0
Pakistan KSE	39,879.9	-1.2	-1.3
Singapore STI	3,262.5	1.3	0.3
South Korea KOSPI	2,443.9	1.1	9.3
Taiwan TWI	15,769.8	0.1	11.5
Thailand SET	1,610.5	1.6	-3.5
Argentina MERV	249,104.1	10.8	23.3
Brazil BVSP*	101,792.5	1.6	-7.2
Mexico IPC	53,883.0	2.5	11.2
Egypt EGX 30	16,411.4	7.6	12.4
Israel TA-125	1,720.3	-1.2	-4.5
Saudi Arabia Tadawul	10,503.2	1.5	-0.4
South Africa JSE AS	76,480.1	1.6	4.7
World, dev'd MSCI	2,739.4	2.0	5.3
Emerging markets MSCI	980.1	1.9	2.5

US corporate bonds, spread over Treasuries

Basis points	latest	Dec 30th 2022
Investment grade	160	154
High-yield	532	502

Sources: Refinitiv Datastream; Standard & Poor's Global Fixed Income Research. *Total return index.

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Commodities

The Economist **commodity-price index**

2015=100	Mar 21st	Mar 28th*	% change on month	% change on year
Dollar Index				
All Items	155.3	153.7	-1.5	-19.8
Food	138.9	137.2	-2.7	-14.3
Industrials				
All	170.7	169.1	-0.6	-23.5
Non-food agriculturals	124.1	122.2	-2.5	-33.2
Metals	184.5	183.0	-0.2	-21.3
Sterling Index				
All items	194.4	190.3	-3.3	-14.6
Euro Index				
All items	160.0	157.4	-3.6	-17.8
Gold				
$ per oz	1,946.3	1,969.6	7.9	3.1
Brent				
$ per barrel	75.2	78.8	-6.2	-28.7

Sources: Bloomberg; CME Group; Cotlook; Refinitiv Datastream; Fastmarkets; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

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Graphic detail

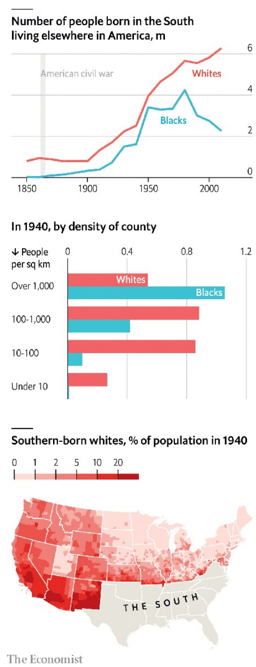
- America’s other great migration

Political movements

America's other great migration

White migrants from America's South turned its northern politics rightwards

Mar 29th 2023

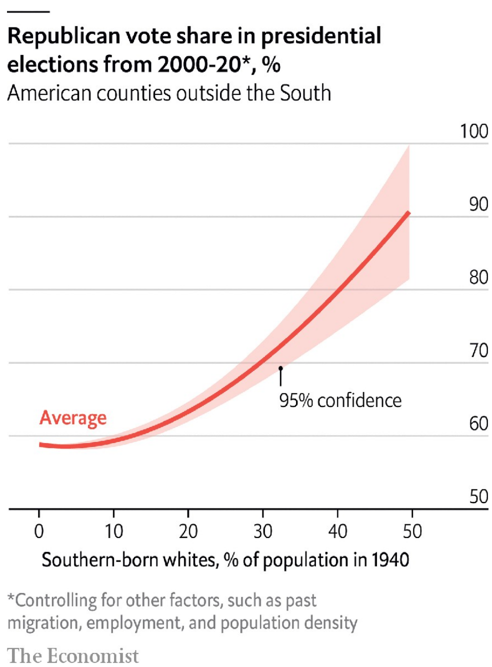


AFTER AMERICA'S civil war, millions of black Americans left the country's southern states. Many were newly freed from slavery. They sought, and often found, better and safer lives, in manufacturing centres such as Detroit and New York. Known as the country's "Great Migration", this flow of people transformed the culture and economies of the places where migrants arrived. It also gave politics in northern cities an enduring push left.

But this was not the only great migration. Between 1900 and 1940, roughly 5m southern whites left former Confederate states and neighbouring Oklahoma. In a peer-reviewed study to be published later this year, Samuel Bazzi, Andreas Ferrara, Martin Fiszbein, Thomas Pearson and Patrick Testa used digitised census records to track these white migrants' journeys. They found that this group was not just greater in number, but, as they spread their culture and attitudes, perhaps in political influence, too.

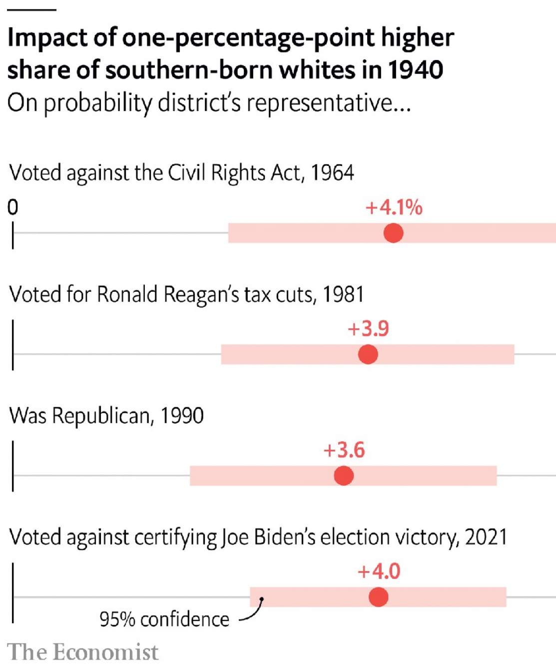
White migrants differed from black ones in ways besides race. Whereas some white migrants were destitute, they were on average richer than black migrants, being about as well-to-do as whites already living in the places where they arrived. And unlike black migrants, who usually went to cities, most of them went to rural areas, often in the country's western states.

The white migrants carried their convictions with them. Surveys conducted in the 1960s show that compared with white people born in the north, they were more often evangelical Christians, and tended to favour racial segregation and oppose government programmes to help black Americans. They were also more likely to set up churches and to work in newspapers and radio, which helped them share their views with their neighbours.



The result was an outsize—and persistent—political impact in these areas, shifting politics right. In northern counties the arrival of one southern white migrant by 1940 led to more than one extra vote for Republican candidates in presidential elections between 2000 and 2020. These effects were small in areas with a modest number of southern white migrants but politically transformative once the southern-born white population reached a critical mass. Their effect on national policy was magnified further: many of them lived in states which were politically competitive or had small populations, where these extra votes matter more.

Legislators, in turn, voted more conservatively on economic and social issues. The authors reckon that a congressional representative in 1964 hailing from a district where southern whites made up their average share (2.9%) of the population in 1940 was five percentage points more likely to vote against the Civil Rights Act than a representative from a county with no southern whites. They were also more likely to support Ronald Reagan's tax cuts—and less likely to vote to certify Joe Biden's 2021 election victory.



Today, Americans are moving in the opposite direction: between 2020 and 2022, nine of the top ten states by net internal migration were in the country's south. Some of the people now heading there will carry a legacy of past migration with them. The researchers found that parents in the north who had a high share of southern-born white neighbours were more likely to give their child a biblical name.■

Chart source: "The other great migration: southern whites and the new right", by S. Bazzi, A. Ferrara, M. Fiszbein, T. Pearson and P. Testa, Quarterly Journal of Economics, 2023

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Obituary

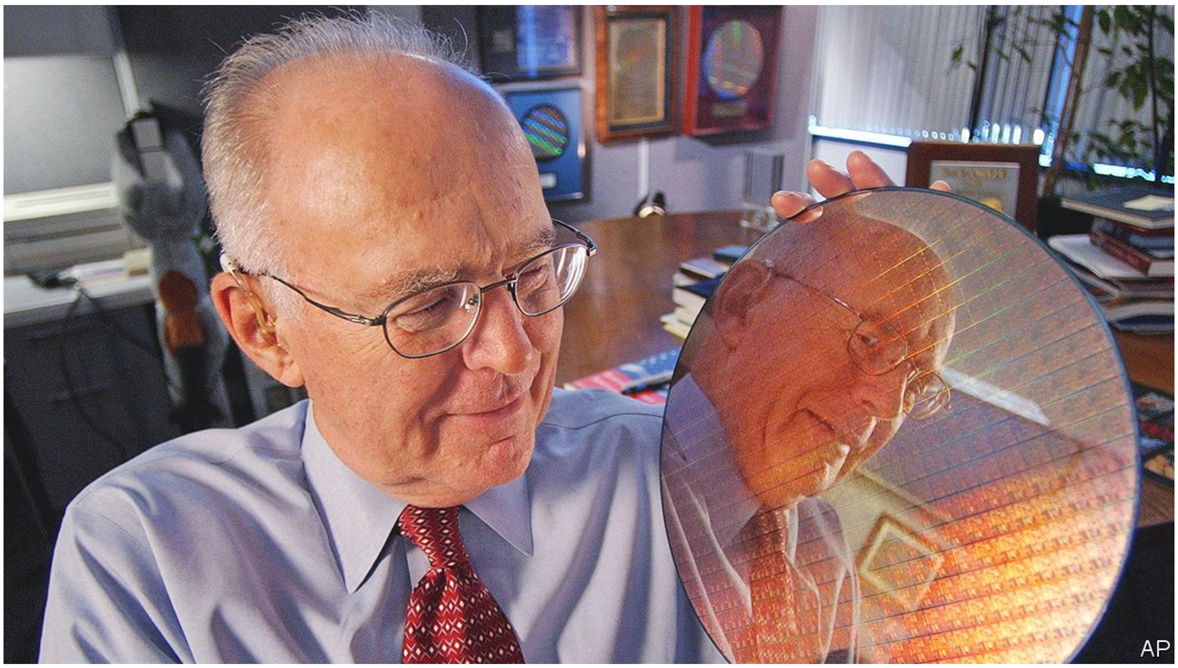
- **Gordon Moore’s law was the spur that drove the digital revolution**

A world built on sand

Gordon Moore's law was the spur that drove the digital revolution

The physical chemist who co-founded Intel died on March 24th, aged 94

Mar 30th 2023



MEDIEVAL PHILOSOPHERS once wondered how many angels could dance on the head of a pin. Gordon Moore, who with his liking for pad, pencil and a quiet, solitary desk often looked philosophical, wondered how many transistors could be etched on one silicon wafer to make an integrated circuit. The first transistors he had ever encountered, in 1954 at a lecture by the man who had co-invented them, William Shockley, were as big as peanuts. But they were shrinking fast. The more you could pack together, the more these tiny marvels could do, until they could probably change the world.

In 1965, in *Electronics* magazine, he laid out his thinking plainly. In the past decade, the number of components in each integrated circuit had roughly doubled every year. In the next decade, therefore, they would probably do the same. Devices containing such circuits would become more efficient, more popular and less expensive, all at an exponential rate. They would

power “such wonders” as home computers, automatic controls for cars, and “personal portable communications equipment”. Even wristwatches could have them. And though he went no further into his crystal ball than 1975, he saw no reason why this extraordinary growth should not go on for a long, long time.

The article caused a sensation. What seemed to him just blind extrapolation was seized on as a Great Truth, “Moore’s law”. From that time on, semiconductor companies took it as a given that the processing power of their product ought to double every year. If it didn’t, they would lose their edge. In 1975 Dr Moore reviewed it, and thought the rate of doubling should be every two years—even though, in the preceding decade, it had in fact doubled in nine of the ten years. This refinement hardly made a difference. The points the industry took away from him were, first, to make semiconductors as tiny as possible, and second, to do it fast. Or fall behind, probably never to recover.

He was surprised to have given his name to any law, and more so to be called a revolutionary. The silicon revolution was a fact, but he himself was a rooted, reserved sort of fellow who had hardly ever lived outside the foggy country south of San Francisco, and whose greatest love, beyond his work and his wife, was fishing. The closest he had come to revolution was when, as a boy, he made explosives with a home chemistry set, and somewhere in his well-stuffed bookshelves he still had his acid-scorched primer on the nature of nitroglycerine. But when it came to forging the digital age he was simply, he thought, in the right place at the right time. He got into semiconductors at the very start, and that was a great piece of luck.

He also drove the transformation, though, and not just with his law. At Shockley Laboratories, where he went in 1956, his job was fundamental: to create a cheap transistor based on silicon, of which the world had plenty. At Fairchild Semiconductor, founded by “the traitorous eight” who broke from Shockley in 1957, he developed a smooth silicon-dioxide surface on which to print the electric circuits and pioneered the use of aluminium wires to connect the transistors. When he founded Intel with Robert Noyce in 1968 he worked on self-isolating transistors, which could be packed more closely, as well as devising a better dip to clean the silicon surface before the

aluminium went on. This single change increased chip production more than tenfold.

He called himself an accidental entrepreneur, but there was not much accident about it. He left Shockley mostly because the man had no interest in getting the product to market. At Fairchild, in which each founder had invested $500, they were making chips commercially in less than a year, and had overtaken both Texas Instruments and Bell Labs in military applications. But Fairchild became too slow for him. His business plan for Intel, vague as it looked—to make interesting things with silicon—was spurred by his burning belief in chips in everything. By the 1990s, Intel microprocessors were in 80% of all the computers made in the world.

Moore’s law stated that as microchips invaded appliances, sales would soar and prices would fall; but setting up to make them was costly. He therefore strived to save money. He fitted out Fairchild’s first premises with cheap kitchen units and blew his own glass tubes to manipulate gases, as he had done for Shockley. At Intel he watched every cent, down to the rubber gloves which he found for $1 a pair, rather than $2.50. This was habit. Until 1961 he had kept a ledger of all household incomings and outgoings, including a nickel found in his wife Betty’s pocket and a dime spent on a pencil “(red)“. After 1961, he no longer needed to; his monthly salary, as charted in the ledger, was rising as steeply as the number of transistors on each chip. By 2014 his net worth was $7bn.

Typically, though, his wealth did not change him. He liked to wear well-worn khakis and go out in his rickety old fishing boat, until it became unsafe. He liked things as they were. When he became rich he and Betty gave more than half of it away. They were motivated by seeing their fishing haunts in Baja California smothered by development, and their precious wild places disappearing. He did not think small. His foundation’s grants went not just to CalTech and the Bay Area but were also earmarked to save two-thirds of the Amazon basin and the whole arc of salmon rivers that curved from northern California, through Alaska, to Russia’s east.

He hoped that might be his permanent legacy. Instead his legacy, inevitably, was Moore’s law, which could not last for ever. He had never said it would; exponential growth always burned itself out. By 2020 its end was predicted

within a decade in America. The Taiwanese were doing well but, even so, transistors could not endlessly be made smaller. In 2021 one was achieved that measured no more than a nanometre, a billionth of a metre, almost the size of an atom. Already billions of transistors could be squeezed on one silicon chip. Naturally, he accepted the laws of physics. As a chemist, though, he could not help hoping that some new material, some new process, might yet make room for more. ■

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America’s other great migration

Obituary

Gordon Moore’s law was the spur that drove the digital revolution